

**CULTURAL INFLUENCE ON EMPATHY:
CROSS-CULTURAL COMPARISON BETWEEN KOREAN AND KOREAN
AMERICAN ADOLESCENTS**

A Dissertation

by

HYUNHEE YOON

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Chair of Committee,	Cynthia A. Riccio
Committee Members,	Anita S. McCormick
	Jeffrey Liew
	Rob Heffer
Head of Department,	Victor Willson

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ABSTRACT

This study investigated differing influence of cultural context on the components of empathy by examining matching ethnic groups of youths growing up immersed in two different cultures, collectivistic Korea and the individualistic United States. Data was collected in Korea (N=416) and in the United States (N=215) for both boys and girls ages 11-17. Participants in both groups completed a measure of empathy that is the Interpersonal Reactivity Index (IRI) and Triandis' cultural orientation scale. The Korean American group was asked to complete a bicultural identity scale, the Cortes, Rogler, and Malgady Bicultural Scale (CRM-BS), and a demographic questionnaire

As the preliminary process, factor analysis was conducted to validate the factor structure of IRI. The results did not yield an acceptable fit for the IRI for either the Korean or Korean American dataset. Only partial constructs pertaining to each group yielded an admissible internal consistency, and these were used for the next analysis. Empathic Concern and Fantasy factors were retained for the Korean American group. Perspective Taking, Fantasy, and Personal Distress factors were retained for the Korean group.

Individuals' internal cultural orientations were used as the predictors of empathy constructs for each group. Individuals who scored high on collectivism also scored high on Empathic Concern, while individuals who scored high on individualism scored low on Empathic Concern in the Korean American group. Additionally, collectivism and horizontal orientation both significantly predicted Fantasy in the Korean American

group. Collectivism and horizontal dimension significantly predicted Perspective Taking and Fantasy in the Korean group. Personal Distress was significantly predicted by the horizontal-vertical dimension, but not by the collectivism-individualism. Finally, the Korean American group's acculturation status, language fluency, subjective identity, and duration of stay in the United States were used as the predictor for Empathic Concern and Fantasy in the Korean American group. Results were not significant for any of those predictors.

Findings indicated different features of empathy constructs between the Korean and Korean American group, perhaps supporting a differing influence of cultural attributes. In addition, a notable finding of this study is that collectivism was significant in predicting cognitive and affective empathy positively.

DEDICATION

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TABLE OF CONTENTS

	Page
ABSTRACT	ii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
 CHAPTER	
I INTRODUCTION	1
Statement of Problem	4
Purpose of Study	4
Implications	6
II LITERATURE REVIEW	7
Affective Empathy and Cognitive Empathy	7
Related Emotional Response: Effortful Control	10
Socializing Factors: Influence of Systems	11
Cultural Contexts	15
Korea and Korean Americans	19
Acculturation	21
Statement of Problem	25
Purpose of Study	25
Research Questions	26
Definition of Term.	28
III METHOD	31
Participants	31
Measures	37
Procedure	41
Data Analysis	42

CHAPTER

IV""RESULTS.....	45
Research Question 1	46
Research Question 2	54
Research Question 3	55
Research Question 4	65
V SUMMCRY AND CONCLUSION.....	71
Limitations	76
Implications	77
Future Research	78
Conclusion	78
REFERENCES	79
APPENDIX A	108
APPENDIX B	110
APPENDIX C	112
APPENDIX D	114

LIST OF TABLES

TABLE		Page
1	Acculturation Strategies of Ethnocultural Groups.....	23
2	Participants' Demographic Information.....	33
3	Distribution of the Korean American Participants' School Districts...	34
4	Socioeconomic Status of the Korean American Identified through the Parents' Occupation.....	35
5	Related Demographic Information of the Korean American Participants.....	36
6	Language Fluency of the Korean American Participants.....	36
7	Subjective Identity of the Korean American Participants.....	37
8	Cronbach's α for the Original IRI in the Korean and Korean American Group.....	47
9	Progressive Model Modification Using Confirmatory Factor Analysis.....	48
10	Four- and Five-Factor Solution Using EFA in the Korean Dataset.....	51
11	Five-Factor Solution in the Korean American and Korean Datasets.....	52
12	Internal Reliability of Cultural Orientation Scales.....	56
13	Correlations among Age, Perspective Taking, Fantasy, and Personal Distress in the Korean Dataset.....	57
14	Correlations among Age, Empathic Concern, and Fantasy in the Korean American Dataset	58
15	Predicting Empathic Concern and Fantasy from the Four Cultural Orientations in the Korean American Dataset.....	58

16	Predicting Empathic Concern and Fantasy from Collectivism and Individualism in the Korean American Dataset.....	60
17	Predicting Empathic Concern and Fantasy from the Four Horizontal and Vertical Orientations in the Korean American Dataset.....	60
18	Predicting Perspective Taking, Fantasy, and Personal Distress from the Four Cultural Orientations in the Korean Dataset.....	61
19	Predicting Perspective Taking, Fantasy, and Personal Distress from Collectivism and Individualism in the Korean Dataset.....	62
20	Predicting Perspective Taking, Fantasy, and Personal Distress from Horizontal and Vertical Orientation in the Korean Group.....	63
21	Descriptive Statistics of the Internal Cultural Orientation Scale for Korean American and Korean Dataset.....	64
22	Percentage of the Participants' Cultural Orientation.....	64
23	Correlation among Age, Empathic Concern, and Fantasy.....	66
24	Predicting Empathic Concern and Fantasy from Acculturation.....	66
25	Estimated Scale Mean Scores of CRM-BS in the Korean American Group.....	67
26	Correlations among Age, Stay Duration, and Cultural Identity Scores on the CRM-S.....	67
27	Descriptive Statistics of Acculturation Status Using 15-Point Cutoff Score.....	68
28	Descriptive Statistics of Empathic Concern and Fantasy.....	69

CHAPTER I

INTRODUCTION

Empathy is defined as the ability to be aware of emotions and thoughts of oneself and others', and to separate one's own feelings and thoughts from those of other people. Empathy is composed of cognitive and affective components (Batson, 1991; Baron-Cohen, 1991; Eisenberg, 2002; Hoffman, 2000). Affective empathy refers to the vicarious sharing of others' emotions as experienced through primary processes called emotional contagion (Eisenberg, 2002; Eisenberg & Fabes, 1995, 1998). Affective empathy is believed biologically inherited and emerges early in life, even observed in infancy (Field et al., 1982; Hoffman, 1987, 2000; Meltzoff & Moore, 1977). Cognitive empathy refers to the ability to identify or reflect on others' thoughts generally by putting oneself into other people's perspective, which develops through childhood as the function of cognitive development (Eisenberg, 2002; Eisenberg & Fabes, 1995, 1998; Hoffman, 2000). Studies describe empathy as a paramount psychological construct that facilitates interpersonal sensitivity, morality, and prosocial behaviors (Eisenberg & Eggum, 2008; Eisenberg & Fabes, 1998; Hoffman, 2000; Michalak, Eisenberg, Spinrad, Ladd, Thompson, & Valiente, 2007). As such, empathy is the pivotal skill for students to be successful and competently function as a social individual.

To date, studies regarding socializing factors of empathy have been limited to the investigation of micro-systemic influence, such as the effect of parenting (Carlo, McGinley, Hayes, & Wilkinson, 2007; Rothbart & Bates, 1998; Valiente, Eisenberg, Fabes, Shepard, Cumberland, & Losoya, 2004) or the effects of social emotional

curricula (SEL) implemented in schools (Cooke, Ford, Levine, Bourke, Newell, & Lapidus, 2007; Frey, Nolen, Edstrom, & Hirschstein, 2005; Holsen, Iversen, & Smith, 2009; Zins, Elias, & Greenberg, 2006). Studies on empathy have not investigated the meso-systemic or macro-systemic influences.

This study looked into empathy development relating to the school settings, a meso-system, where intensive socialization takes place. Strong empathy skills appear to be a key element to students' academic success and social/interpersonal adaptation in schools. Function of empathy in school settings has been intensively studied, and the mediating role of empathy has been suggested relating to academic success (Izard, 2002; Wentzel, 1991, 1993; Wentzel, Weinberger, Ford, & Feldman, 1990; Wentzel & Wigfield, 2009), peer acceptance (Coie, Dodge, & Kupersmidt, 1990; Newcomb, Bukowski, & Pattee, 1993), and prosocial/moral behaviors (Eisenberg & Miller, 1987). In addition, empathy is known as the protective factor for aggression/externalizing behavior (Feshbach & Feshbach, 1982, 1998, 2009; Miller & Eisenberg, 1988), substance abuse, poor academic performance, school dropout, and early parenthood (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989; Lochman & Lenhart, 1993; Newcomb, Bukowski, & Pattee, 1993).

On the other hand, human psychological constructs develop through the course of mutual interactions within multilayered ecological systems (Hedden, Ketay, Aron, Markus, & Gabrieli, 2008; Kitayama, Duffy, Kawamura, & Larsen, 2003; Markus & Kitayama, 1994, 2010; Wu & Keysar, 2007). Differing influences of cultural contexts on human psychological constructs have been investigated in relation to the bi-

dimensional cultural framework: collectivism and individualism (Gudykunst & Ting-Toomey, 1988; Hofstede, 1983; Triandis, 2001; Triandis & Gelfand, 1998; Wu & Keysar, 2007). Collectivism represents a tightly knit social framework where a society's value lies on the members' social responsibility and in-group harmony over personal needs and/or goals (Triandis, 2001; Wu & Keysar, 2007). Then, it is likely that collectivism tunes the members' psychological processes/ constructs to be alert to given social situations. Through socialization, the members of collectivistic culture appear to develop self-concept that is context-dependent, capitalizing on perspective-taking skill (Markus & Kitayama, 1994; Triandis, 2001; Wu & Keysar, 2007). Youths growing up in collectivism are more flexible than youths in individualism when it comes to perspective-taking or the ability to reflect on the state of mind of others because their cultural atmosphere channels them to do so (Markus & Kitayama, 1991; Wu & Keysar, 2007).

In contrast, individualistic culture values independence, self-reliance, and expression of positive emotion, which appears to facilitate the members' active emotional expressions and the self-concept that is context independent (Markus & Kitayama, 1994; Triandis, 2002). Thus, youths growing up in an individualistic culture are likely to be more flexible in emotional expressions than youths in collectivism (Matsumoto, 1990; Niedenthal, Silvia, & Francis, 2006). Youths might internalize the values or attributes of their imminent culture (e.g., original culture of their family or school) or distal culture (e.g., community or country) by early teenage. Thus, examination of adolescents' feature of empathy in two distinct contexts is likely to

reveal differing effects of cultural contexts on empathy. To date, empirical studies on empathy development in relation to cultural contexts have been scarce.

Statement of Problem

While research has considered empathy from a variety of perspectives, a number of factors limit the available knowledge. First, there is a paucity of research on empathy in adolescents regarding socializing factors. In addition, existing studies on socializing factors have tapped only a micro-systemic influence on the development of empathy, such as parenting styles (e.g., Kiang et al., 2004; Strayer & William, 2004). Cross-cultural studies suggest differing cultural influences on psychological constructs; however, empathy has not been investigated in these studies. With increasing numbers of students coming from diverse cultural backgrounds in the U.S. schools, differing influences of proximal (e.g., family) and distal cultures (e.g., community or country) on empathy warrant a consideration. For research specific to cultural influence on empathy, one hindrance is the lack of identified measures of empathy available for adolescents who are not English speakers.

Purpose of Study

This study was designed to address some of these issues and to add empirical evidence to the knowledge base of empathy and cultural differences. The focus of this study was the cultural context as an environmental influence on empathy development. Particularly, the dichotomous frame of culture, collectivism and individualism, was used. One purpose of this study was to establish the usefulness of the measure of empathy, the Interpersonal Reactivity Index (IRI), with Korean and Korean American

youths as a starting point. Using this measure, the intent of the current study was to investigate the role of cultural attributes as the differing socializing factors on empathy development in children and youths.

The IRI is a multifaceted questionnaire of empathy that is one of the most widely used; yet this index has not been used with Korean youths or Korean American youths. Thus, this study first examined the extent to which the construct of empathy was measured similarly in these two populations. For this purpose, this measure was translated into Korean and back translated into English in order to reflect the intent of the wording in the original language. Verification of the construct validity was attempted via factor analytic procedures.

The topic of interest examined the effect of the individuals' personal cultural orientations. The participants' personal cultural orientations were measured using Triandis and colleagues' cultural orientation model (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis & Gelfand, 1998) that expanded the traditional construct of the individualism-collectivism continuum. This model added a horizontal-vertical dimension that is nested within each individualism and collectivism continuum depending on valuing of equality (horizontal) or emphasis on hierarchy (vertical). This model yields four categories of cultural orientations. Based on the existing research, it was hypothesized cognitive empathy would be prominent in collectivism in contrast to affective empathy prominent in individualism. Lastly, living in a different culture potentially alters the external cultural influence and/or internal cultural orientation.

Hence, the influence of acculturation was examined in relation to empathy constructs for the Korean American participants only.

Implications

Cultivating students' empathy skills seems to be the key to generate harmonious and a non-violent school climate on system level, as well as to increased academic achievement and social emotional competence on individual level. When considering cultural and linguistic diversification in the U.S. schools, identification of cultural attributes that may facilitate empathy skills may provide significant theoretical and practical implications to the current circumstance of the schools.

CHAPTER II

LITERATURE REVIEW

Empathy refers to the ability to vicariously experience others' emotional arousal and state of mind or thoughts. Empathy is the essential ability to establish social reciprocity, morality (Decety & Jackson, 2004; Hoffman, 2000), and prosocial behaviors (Batson, 1991; Eisenberg, 2002). The importance of empathy as the foundation of social emotional competence has been emphasized in educational settings over the past decades, resulting in creation and implementation of social emotional learning (SEL) curriculums in schools (Commission on Positive Youth Development, 2005; Conduct Problems Prevention Research Group, 2010; Lösel & Beelman, 2003). A couple of representing SEL curricula includes the Promoting Alternative Thinking Strategies curriculum (PATHS curriculum; Kusché, & Greenberg, 1994; Greenberg, 1997) and the Second Step (Frey, Hirschstein, Edstrom, & Snell, 2009; Holsen, Iversen, & Smith, 2009; Holsen, Smith, & Frey, 2008), which teach empathy as the primary skills to master. Large-scale studies that investigated the effect of these curricula in schools suggested decreased school violence and improved positivity in schools (Frey et al, 2009; Greenberg, Kusche, Cook, & Quamma, 1995; Zins, Elias, & Greenberg, 2006). The current knowledge base of empathy will be discussed in the following section.

Affective Empathy and Cognitive Empathy

There have been diverse conceptualization and operationalization of empathy (Baron-Cohen, 1991; Batson, 1991; Davis, 1980, 1984; Eisenberg, 2002; Eisenberg & Fabes, 1995, 1998; Hoffman, 2000; Ickes, 2003), yet a concurrence on the general

definition of empathy is that empathy is vicarious experience of other people's feelings and thoughts. Empathy is comprised of two components: affective empathy and cognitive empathy.

Affective Empathy

Affective empathy refers to vicarious experience of others' emotional arousal (Eisenberg, 2002; Eisenberg, Eggum, & Giunta, 2010; Eisenberg, Spinrad, & Sadovsky, 2006; Mikalak et al., 2007) that is similar to others' feelings or what one is expected to feel in the given circumstances. Affective empathy is believed to be a biologically inherited primordial component mainly experienced through emotional contagion or emotional resonance (Eisenberg, 2002; Field, Woodson, Greenberg, & Cohen, 1982; Hoffman, 2000; Meltzoff, 2002). Emotional contagion refers to the spontaneous mimicry of one's emotional expression derived when observing other people through physical channels, such as one's own facial expressions, tones of voice, and body postures (Eisenberg, 2002; Hatfield, Cacioppo, & Rapson, 1993). An infant's contagious crying upon observing other infant's crying is an example of emotional contagion. Emotional resonance means the reverberation of perceived feelings of another over time (Hoffman, 2000; Meltzoff, 2002).

Upon perceiving other people in plight or in needy situations, one may experience an intensively negative emotional arousal that is self-oriented which is called personal distress (David, 1980, Eisenberg, 2002). One may experience an arousal of concern and compassion for them. This state is called empathic concern (David, 1980; Eisenberg, 2002). When experiencing personal distress, one may want to escape from

that situation (David, 1980; Eisenberg, 2000, 2002; Eisenberg et al., 2006; Eisenberg et al., 2010), while experiencing an increased other-oriented distress may lead one to altruistic compassion or prosocial helping, caring, and sharing behaviors (Eisenberg, 2000, 2002; Eisenberg & Fabes, 1998; Eisenberg & Miller, 1987; Hoffman, 2000). Evidence from previous studies indicated either no relationship or a negative relationship between personal distress and moral/ prosocial behaviors in children or adults (Batson 1998; Eisenberg & Fabes 1995, 1998).

In the previous studies, affective empathy has been generally measured via the Empathic Concern (EC) and Personal Distress (PD) subscales of the IRI, generally (Cassels, Chan, & Chung, 2010; Davis, 1980; Davis & Franzoi, 1991). Studies measured the variance of affective empathy using the IRI in two different cultures indicated that Eastern Asian children experienced greater personal distress than empathic concern as compared to their Western counterparts (Tromsdorff, Friedlmeier, & Mayer, 2007) and adolescents (Cassels et al., 2010).

Cognitive Empathy

Cognitive empathy refers to the ability to identify others' thoughts/feelings and see things from others' view point in term of perspective-taking, or fantasize about characters in novel, media, plays, and other fictional situations (Eisenberg, 2002; Eisenberg & Fabes, 1995, 1998; Davis, 1980; Hoffman 2000). Cognitive empathy emerges as the function of cognitive development through childhood, which enables a child to distinguish one's own feelings and thoughts from those of others' (Eisenberg, Spinrad, & Sadovsky, 2006; Field et al., 1982; Hoffman, 2000; Meltzoff, 2002). The

neutral state of empathic arousal (affective empathy) turns into prosocial or moral behaviors when mediated by the emergence of cognitive empathy (Eisenberg & Fabes, 1995, 1998). While the advent of cognitive empathy leads to more complete and accurate knowledge about others' thoughts and feelings (Eisenberg & Fabes, 1995, 1998; Ickes, 2003), empathic sensitivity about emotions are the basis of cognitive empathy. Cognitive empathy has been measured generally via the Perspective Taking (PT) and Fantasy (FS) subscales on the IRI (Davis, 1980).

Related Emotional Responses: Effortful Control

Effortful control is one of the most closely related psychological constructs to empathy, referring to the ability to attend, inhibit, and control one's responses as needed to adapt to social environments, particularly when the individual does not want to do so (Eisenberg, Spinrad, & Sadovsky, 2006; Lengua, Bush, Long, Kovacs, & Trancik, 2008; Rothbart & Rueda, 2005). This notion involves an executive attention process, which is related to voluntary control of thoughts and feelings (Garon, Bryson, & Smith, 2008; Zelazo, Craik, & Booth, 2004).

Review of literature suggests that empathic children were better able to attend to others' emotional states through effortful control rather than focusing on their own personal distress (Rothbart & Bates, 1998; Rothbart & Rueda, 2005). Increased emotional regulation and increased empathic concern towards others were observed in prosocial situations (Eisenberg, Fabes, & Murphy, 1996; Eisenberg, Spinrad, & Sadovsky, 2006). It was reported that empathic children reacted in a prosocial and decisive manner with a sense of immediacy and attended persistently to a situation or

problem until it was resolved (Rothbart, Ahadi, & Hershey, 1994). These results indicate that empathy is closely related to emotional regulation and cognitive flexibility (Eisenberg & Fabes, 1995; Eisenberg, Spinrad, & Sadovsky, 2006).

In another line of research, Eisenberg and Fabes (1996) proposed that children with high level of empathy would experience more intense vicarious affective arousal to others' emotions, as well as possess better capacities for self-regulation than children who were not highly empathetic. Miller and Haar's (1997) qualitative study supported Eisenberg and Fabes' (1998) hypothesis that highly empathic children tended to more actively use effortful control (e.g., attention focusing, perceptual sensitivity, and inhibitory control) and tolerated intensive negative affect than less empathic children.

Socializing Factors: Influences of Systems

Parenting

Parenting style has been investigated as a socializing factor of empathy in children. The findings consistently indicated a correlation between parents' warmth and positive expressivity and children's empathic tendency (Darling & Steinberg, 1993; Zhou, Eisenberg, Losoya, Fabes, Ivanna, Guthrie, Cumberland, & Shepard, 2002). Children's positive behaviors were increased when parents' prosocial behaviors were modeled within the familial contexts (Rheingold, 1982), or when children had more opportunity to participate in prosocial activities (Keller, Yovsi, Borke, Kärtner, Jensen, & Papaligoura, 2004; Whiting & Edwards, 1988).

Influence of Systems

Borrowing from the eco-systemic developmental theory, Bronfenbrenner (1999) indicated that values and rules typified by macro-systemic culture have a cascading influence on the sub-level systems throughout interactions. Therefore, it is expected that youths tend to develop more prosocial attitudes, behaviors, and interpersonal sensitivity when they are raised in a macro-system wherein the common good of the society and social responsibility are emphasized and valued.

Emotions

Emotion is the precursor of human social behaviors and is derived from individuals' adaptation to their systems. Emotion is developed through the match of personal values along with the belief systems in a specific culture (Markus & Kitayama, 1994, 2010). Emotional response is essential to social integration and regulation of behaviors (Zajonc, 1980). Since emotional experience and regulation is subject to the norms of societies, the members of a society naturally obtain and internalize the fundamental emotion scripts through socialization; people feel good or bad about the consequence of their social behaviors based on these emotion scripts (Markus & Kitayama, 1994). Emotion script is applied to the expression of empathic concern. Oyserman and Markus (1993) viewed the socialization of emotion as an integral part of sense of self which, in turn, shapes what is perceived as good and not good, through social values, concerns, appropriateness, and so on (Oyserman & Markus, 1993). Different cultures have different desirability, and perceived appropriateness of emotion may vary. For example, *situational feeling* refers to a society's general agreement on

how people should feel in specific situations (e.g., on a wedding day, at a funeral; Hochschild, 1983). Norms for emotional experience exist in the form of *generalized expectations*, as well. For example, Americans value enthusiasm; Greeks highly value respect; West Indians value pride, and Chinese consider negative emotions to be useful and constructive (Eid & Diener, 2001).

Another aspect of emotional process is the manner of emotional expression in the social context. Matsumoto (1990) defined *display rules* as the culture-specific guidelines and values concerning the appropriateness of emotional displays communicated from one generation to the next. Individualistic culture encourages display of members' positive emotions in private and public. On the other hand, collectivistic culture generally discourages emotional expressions for the sake of group harmony (Matsumoto, 1990). Outcomes of ethnographic studies have shown strong cultural differences in the social consequences of emotions and emotional expression. The expression of anger, for example, is strongly disapproved in the Utku Eskimos (Briggs, 1970), whereas the Kaluli, a clan of Papua New Guinea, are encouraged to show their anger (Mesquita & Frijda, 1992; Schieffelin, 1983). Further, Markus and Kitayama (1991) suggested that anger might be less prevalent in East Asian cultures because it derives from and promotes an independent view of the self. The fundamentally different foci in worldviews of collectivism and individualism may lead one to experience different emotions in the same situation or to reinforce the way members express their emotions in a given situation (Brewer & Gardner, 1996). Thus,

emotional experience is culturally influenced and is likely to affect the development of empathy.

Perception and Cognitive Processes

Cross-cultural studies provide evidences of cultural influence on perception and cognition processes (Hedden et al., 2008; Kitayama et al., 2003; Wu & Keysar, 2007). The findings of Wu and Keysar (2007) suggested positive influence of collectivism on perspective-taking skill, reporting a significant difference in perspective-taking skill between Chinese and American college students. The participants were required to play a communication game actively taking the imaginary counterpart's perspective, and the results were measured based on eye-gaze tracking and behavior, controlling intelligence and age. Chinese students outperformed and exhibited an increased use of perspective-taking skill as compared to their American counterparts. This result was explained by the cultural pattern of interdependence in Chinese culture that encourages members to be tuned to fellow members' needs or goals. Further, the participants' cultural backgrounds and the degree to which the participants endorsed cultural values moderated their perspective-taking skill even on simple visual and attention tasks. Thus, this literature illustrates the differing influence of cultural contexts on perspective taking that is the core component of cognitive empathy.

Evidence supports cultural influence on the ability to contextualize or decontextualize information being processed (Kitayama et al, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001). Nisbett et al. (2001) suggested that Japanese were more capable of consolidating contextual information in making a judgment on perception task while

Americans were more capable of ignoring contextual information. In line with this recognition, finding of Kitayama et al. (2003) suggested that the American participants exhibited improved accuracy in judging absolute length of the perceived stimuli (absolute task) than the Japanese participants while the Japanese participants exhibited improved accuracy in judging relative proportion of the perceived stimuli (relative task) than the American participants. Channeled through the practice of individualism, the de-contextualizing ability appeared to prime the American participants for improved accuracy on judging absolute length tasks. On the other hand, channeled through the practice of collectivism, the contextualizing ability appeared to prime the Japanese participants for improved accuracy on judging relative ratio task.

Cultural Contexts

Culture has been conceptualized as the pattern of mental and emotional representations, practices, behaviors, and artifacts shared and distributed by a group of people, which emerges through the course of adaptive interactions between human beings and the environments (Hedden et al., 2008; Hofstede, 1983; Markus & Kitayama, 1994; Masuda et al., 2008; Shweder, 1990; Sue et al., 1998; Triandis, 2001). Culture is transmitted across time and generations (Atran, Medin, & Ross, 2005; Jenkins & Karno, 1992; Kroeber & Kluckhohn, 1952; Markus & Kitayama, 1991; Triandis, 1995). Literature suggests the differing influences of collectivism and individualism (Markus & Kitayama, 1991; Triandis, 1995; Shweder, 1990) on variations in the pattern of emotional expression (Tsai, Levenson, & McCoy, 2006), motivations for self-consistency and self-

esteem (Suh, 2002), and types of emotions associated with well-being (Kitayama, Markus, & Kurokawa, 2000).

Hofstede's (1983) dichotomous continuum of cultural model has been attributed to the explanation of systematic cultural variations in psychological processes and behaviors (Gudykunst & Ting-Toomey, 1988; Hofstede, 1983; Hui, Triandis, & Yee, 1991; Kwan & Singelis, 1998; Kanagawa, Cross, & Marcus, 2001; Markus & Kitayama, 1991; Oyserman, 1993, 2002; Triandis, 2001). Hofstede's model classified 50 countries based on a dimensional view that places individualism and collectivism at opposite ends of a continuum. Korea was placed at the collectivistic end of the continuum along with other Asian countries (e.g., Thailand, Hong Kong) and South American countries, whereas the United States was placed at the individualistic end of the continuum along with Canada and Sweden (Hofstede, 1983). Findings so far illustrate contrasting differences in collectivistic and individualistic societies relating to psychological processes, values, patterns of emotional expression and thoughts, and members' sense of self.

Collectivism

Within a collectivist culture, direct expression of emotion and feeling tend to be restrained for the sake of group harmony (Kwan & Singelis, 1998). Important group memberships are perceived as ascribed, fixed, and viewed as facts of life to which people must accommodate (Kwan & Singelis, 1998). Boundaries between in-groups and out-groups are stable and relatively impermeable (Morris & Leung, 2000; Triandis, 1995). Definitive attributes of collectivistic culture lie on the prominence of social roles

and responsibility, abiding social norms, and group's goals over personal attitudes and needs (Hofstede, 1984; Schwartz & Bilsky, 1990; Triandis, 1995). In addition, members' self-concept is situation-flexible and relational (Kanagawa, Cross, & Marcus, 2001; Markus & Kitayama, 1994; Oyserman, 1993; Triandis, 1995). As the result, in collectivism, members' psychological well-being lies in fulfilling social roles and obligations (Kwan & Singelis, 1998; Markus & Kitayama, 1994). Individuals are considered as parts of the whole system, such as family, community, and country. Accordingly, collectivists are motivated by social norms and responsibilities (Triandis, 1989).

Individualism

Individualism refers to a preference to a narrowly defined primary group, one's immediate family or negotiated social relations (Hofstede, 1983; Schwartz & Bilsky, 1990). In such a culture, personal judgment, reasoning, and causal inference are oriented toward people rather than situations or social contexts (Choi, Nisbett, & Norenzayan, 1999; Morris & Peng, 1994). Definite attributes of individualism include values on personal autonomy, self-fulfillment, and personal accomplishment, rights above duties, and concerns for oneself and one's immediate family (Hofstede, 1980). In an individualistic culture, the primary goal is personal well-being and is related to direct emotional expression and attainment of personal goals (Diener & Diener, 1995; Markus & Kitayama, 2010).

Horizontal and Vertical Dimensions in Collectivism and Individualism

As the world has been increasingly globalizing, cultural research has expanded the dichotomous cultural category of collectivism/individualism, adding an additional dimensional perspective (Kirmayer, 2006; Mathews, 2000; Niedenthal, Silvia, & Francois, 2006; Triandis, 1995). Attending to cross-national bonds and intercultural influences that have a profound impact on groups and individual identities (Kirmayer, 2006; Mathews, 2000), this line of research indicates that one's cultural orientation may not parallel to the immediate cultural context. The assumption of the traditional cultural model is that people in the same culture form a homogenous cultural pattern. Triandis (2001), however, suggested that members of either collectivistic or individualistic cultures might selectively form their own preferences, values, attitudes, and motivations both from individualistic or collectivistic cognitive structures. In some individualistic society, equality among society's members prevails (e.g., Australia and Sweden), whereas the other individualistic society, such as the United States, hierarchy of the society prevails (Triandis, 1995, 2001). Given the difference, Triandis (1995, 2001) added another explanatory dimension focusing on either equality or hierarchy within a group. Specifically, both individualism and collectivism can be either horizontal (where equality prevails) or vertical (where hierarchy prevails). Horizontal individualists tend to desire uniqueness and serve their own motivations while vertical individualists respond to both self-serving motivation and motivation to serve others. Horizontal collectivists cooperate with group members' goals and motivations, but the group's goal

is not their primary consideration. In contrast, vertical collectivists are willing to sacrifice themselves for the group's goals and motivations (Triandis, 1995, 2001).

Although this typology was initially proposed to facilitate between-culture comparisons, it expands one's understanding of variations within individualism and collectivism. Singelis et al., (1995) developed a measure of cultural orientation and validated the construction of the multi-dimensional categories. Via cross-cultural factor analytic studies, they extracted a four-factor structure [i.e., vertical individualism (VI), vertical collectivism (VC), horizontal individualism (HI), horizontal collectivism (HC)]. Triandis (1998) found the equivalent four-factor structure of the multi-dimensional construct in Korean college students. This typology so far has been tested only in a limited number of cross-cultural studies; however, given the importance of within-culture comparisons, use of this cultural typology may enrich the understanding of individual differences within a culture.

Korea and Korean Americans

Demographic Characteristics of Korean Americans

The Korean American population has gradually increased in the U. S., especially, in the Southern states, marking a 46% increasing rate during 1990 to 2000 (Yu, 2001). Korean Americans comprise approximately 0.6% (1.7 million) of the U.S. population, which place Korean Americans at the fifth largest Asian American population in growth ("Asian Population: 2010 Census Brief," 2010). According to Suh (2004), Christianity and residential suburbanization are the two main characteristics of the Korean American population in the U.S. Majority of the Korean American immigrants tend to convert to

Christianity upon arrival in the U.S. due to the church's responsiveness and support for the need of new immigrants. About 60% to 70% of Korean Americans identified them as Christian at the time of arrival in the U.S. (Suh, 2004). Buddhist temples provide fewer social networking and business opportunities, approximately 2% to 10% of Korean Americans were identified as Buddhist (Lee & Nadeau, 2011). Yu (2001) reported that the majority of recent Korean immigrants relocated to the U. S., with relatively advanced educational backgrounds and professions. They come from the large urban cities in South Korea, and 96% of them reside in the suburbs in the metropolitan cities in the U.S. (Yu, 2001). Residential suburbanization is related to their pursuit of quality education, profession, and better business opportunity (Yu, 2001). These religious, residential, and professional characteristics of Korean Americans should be considered when collecting data in the U.S.

Cultural Transition of Korean Population

Korea culture has been considered as collectivism traditionally while American culture has been considered as individualism (Hofstede, 1980; Keller, 2007; Markus & Kitayama, 1994, 2010; Triandis, 1995, 1998). When Hofstede's model (1980) was created, agriculture-based Korean society was placed at the collectivistic end of the continuum. Since the 1970s, this country has been rapidly industrialized and, subsequently, the lifestyle of Koreans has become largely westernized. This is partly due to the country's strong alliance with the U. S. after the Korean War. A great deal of cultural exchange and westernization occurred in Korean society due to the political, economic, and military alliances between Korea and the U.S. over the past half-century

(Cummings, 1997). These influences might have caused a shift in Korea's position on the continuum of the Hofstede model (Cummings, 1997).

Empirical findings about Koreans' cultural configurations in recent studies, however, represent a portrait that is different from traditional collectivism. For example, Han and Shin (1999) argued that Korean youths' cultural orientation is transforming from vertical collectivism where family integrity is highly valued to horizontal individualism where self-reliance is valued over family integrity. On the other hand, Choi (2006) suggested that Korean middle and high school students are still bonding to horizontal collectivism, putting more emphasis on interdependence and sociability. Studies providing detailed illustrations of the Korean young generation's cultural orientations are sparse. There is a possibility that Korean adolescents' cultural orientation may be in the process of changing at the current time.

Acculturation

Acculturation is another cultural context to examine in order to identify the influence of transitioning culture. Acculturation is a dynamic process that individuals of a cultural group adopt value system, language, and behavioral pattern of the host society, which occurs on socio-cultural (macro-system) and individual (micro-system) level (Berry, 1980). Kitayama et al., (2003) found a possible acculturation effect on individual's perception process. Acculturation effect on psychological processes supports the role of cultural influence in guiding and shaping interpersonal and intrapersonal psychological processes (Heddon et al., 2008; Kitayama et al., 2003).

Given that, discussion about two acculturation models would be required to explain acculturation processes.

Unidirectional Model

A unidirectional model of acculturation assumes immigrants eventually accept all aspects of a new society/culture at the cost of losing the aspects of their original society/culture (Bourhis, Moise, Perreault, & Senecal, 1997; Nguyen, Messe, & Stollak, 1999). This model cannot differentiate bicultural individuals having high familiarity with both societies from those having low familiarity with both societies (Cuellar, Arnold, & Maldonado, 1995). It seems that bicultural individuals may give up some of their original cultural characteristics to a certain degree in order to take on elements from a new culture (Lee et al., 2003).

Multidimensional Model

Alternatively, an expanded model of acculturation incorporated pluralism, proposing a four-folding model of acculturation status (Berry, 1997, 2003; Kramer, 2010; Sam & Berry, 2010). On an individual level, one can choose acculturation strategies depending on orientation toward one's own culture and the host culture (Berry, 1997, 2003; Sam & Berry, 2010). Berry's multidimensional model conceptualizes both new and old cultures on a single continuum. Individuals' preference on their acceptance and adherence to their host and original cultures may vary. According to this model, accepting cultural characteristics of a host society does not necessarily lead to relinquishment of one's original cultural characteristics (Berry, 1997, 2003; Sam & Berry, 2010; Kramer, 2010; Lee et al., 2003). According to this

model, acculturation does not have to be a zero-sum trade-off, and one can choose his/her acculturation strategies on individual level. Depending on the degree to which individual maintain the identity of the original culture and acceptance of a new culture, one's acculturation status represents one of the four different strategies (Berry, 1997). Acculturation strategies are presented in Table 1.

According to Berry (1997, 2003), Sam and Berry (2010) integration strategy denotes the strategy that new members adopt the social norms/values of a dominant culture while maintaining those of their original culture simultaneously. Berry (2003) and Sam and Berry (2010) argued that integration status could be chosen freely and pursued by non-dominant groups only when a dominant culture has an open and inclusive orientation toward cultural diversity.

Table 1
Acculturation Strategies of Ethnocultural Groups

	Relationship Sought in New Group		
		Positive	Negative
Maintenance of Heritage Culture/Identity	Positive Negative	Integration Assimilation	Segregation Marginalization

Assimilation strategy involves relinquishment of one's original cultural identity while accepting the values, beliefs, and norms of the new culture. Segregation denotes the strategy that immigrants retain their original cultural values and beliefs without adopting any of the values and beliefs of a dominant culture. Marginalization is the result of losing identification with the native culture without adopting the values and

beliefs of the new culture. Berry (2003) further argued that the goals of diversity and equity correspond closely to integration status, whereas push for uniformity resembles assimilation approach.

Empirical Comparison of Two Models

Lee et al., (2000) suggested the advantage of multidimensionality to explain acculturation process in Korean Americans than unidirectional model. In their study, cluster analysis yielded three main group classifications: integration, assimilation, and segregation. Marginalization, however, was not found (Lee et al., 2000). Theoretical distinction between segregation and assimilation lies on adherence to either the original culture or the host culture. This study, however, reported that all three groups showed some degree of a positive relation in their retaining value of American and Korean culture via participation to social networks and food preferences. Moreover, one-third of the assimilated group members identified them immensely Korean and retained some Korean cultural practice, such as food consumption and social participation/network. Specifically, the integrated group maintained participation in both Korean and American social networks. Integrated status implies cognitive flexibility in social circumstances, which also involves the notion of biculturalism or bicultural identity (Mezzich, Ruiperez, Yoon, Liu, & Zapata-Vega, 2009). The segregation group also adopted a certain extent of American cultural practice, such as mass media consumption and participation in American religious activities, but to a lesser degree than the assimilation group (Lee et al., 2003). These results suggest the advantage of the multidimensional model in describing acculturation process (Lee et al., 2003).

Statement of Problem

For students in school, empathy is critical to academic success, as well as to peer relationships. Thus, identification of factors that may affect the development of empathy will add practical and theoretical information on the knowledge base of empathy. While research considers empathy from a variety of perspectives, a number of factors limit available research. First, developmental studies of empathy have focused mostly on infants and young children. There is a paucity of research with preadolescents and adolescents in relation to empathy or influence of socializing factors. Second, the existing studies on empathy and socializing factors have been limited to discussions around the impact of parenting styles, tapping only the micro-systemic influence (e.g., Kiang, Moreno, & Robinson, 2004; Strayer & William, 2004). Cross-cultural studies have revealed cultural influences on psychological domains; however, empathy, as a specific psychological construct, has not been investigated in these studies. In particular, the culture-specific (i.e., collectivism and individualism) influence on development of empathy have not been considered. With increasing numbers of children and adolescents from diverse cultures in schools, these cultural influences warrant consideration.

Purpose of Study

The purpose of this study was to investigate the role of culture, as a socializing factor, on empathy development. Based on existing cross-cultural research, it was hypothesized that students growing up immersed in a collectivistic culture were more likely to be encouraged to practice cognitive empathy while students growing up in an

individualistic culture are more likely to be encouraged to practice the affective aspect of empathy. There is a paucity of research regarding cultural influences on empathy development in adolescence. Thus, examination of differences in empathy for two culturally different groups of adolescents may illustrate culture-specific influences on the components of empathy.

One impediment to research specific to cultural influences on empathy is the lack of identified measures of empathy available for use with adolescents, particularly, those who are not English speakers. The current study used the Interpersonal Reactivity Index (IRI; Davis, 1980) to measure empathy. The IRI, a multifaceted questionnaire of empathy, is one of the most widely used measures of empathy but was not previously translated and validated with Korean youths or Korean American youths. Thus, this study had second purpose to examine the extent to which the IRI measured the construct of empathy similarly in these two populations. Individual's cultural orientation was measured by Triandis' and his colleagues (Triandis, 1995; Triandis et al., 1998; Triandis & Gelfand, 1998) model of cultural orientation.

Research Questions

Research Question 1

Is the IRI factor structure for Korean students the same as the original structure proposed by Davis (1980)? Is the IRI factor structure in Korean American students the same as the original structure proposed by Davis?

It was hypothesized that the four-factor structure as proposed by Davis (1980) would be extracted in both Korean and Korean American samples.

Research Question 2

If the extracted factor structures are equivalent and a group comparison can be made, is there any group difference on the factor score between the Korean and Korean American group?

It was hypothesized that although equivalent factor structures may be extracted in both groups, there would be a certain degree of variation between the two groups' scores on the IRI.

Research Question 3

How is a student's cultural orientation related to empathy development? How will the four groups' [i.e., Vertical Individualism (VI), Vertical Collectivism (VC), Horizontal Individualism (HI), Horizontal Collectivism (HC)] empathy scores differ by a factor?

Assuming both Korean and Korean American groups' IRI factor structure will be equivalent to the original one, it was hypothesized that the scores on Perspective Taking (PT) and Fantasy (FS) will be in the following order: $VC > HC > VI > HI$. Empathic Concern (EC) and Personal Distress (PD) on the IRI will be in the reverse order.

Research Question 4

How does the acculturation status (i.e., integration, assimilation, tradition, segregation) of Korean-Americans influence empathy as reflected on the factor scores of the IRI?

It was hypothesized that Perspective Taking (PT) and Fantasy (FS) would occur in the following order: Integration group > Traditional group > Assimilation

group>Marginal group. Empathic Concern (EC) and Personal Distress (PD) were expected to occur in the reverse order.

Definition of Term

Affective Empathy

Affective empathy refers to the state of emotional arousal in terms of vicarious sharing of others emotion (Eisenberg & Strayer, 1987; Hoffman, 2000). Eisenberg and Strayer (1987a, p. 5) defined empathy as "an emotional response that stems from another's emotional state or condition, and that is congruent with the other's emotional state or situation." Hoffman's (1987, p. 48) definition of empathy also referred to the emotional aspect of empathy, as stated "an affective response more appropriate to someone else's situation than to one's own." Affective empathy takes two forms: personal distress and empathic concern. Personal distress refers to one's own feeling of distress in when perceiving others in flight and may or may not reflect the actual emotion of the other person (Davis, 1980). Empathic concern refers to feeling of warmth/compassion for the observed others in needy situation (Davis, 1980).

Cognitive Empathy

Cognitive empathy refers to the ability to identify or guess others' thoughts and feelings. Davis (1980) included perspective taking and fantasy as two components of cognitive empathy in the Interpersonal Reactivity Scale. Perspective taking refers to the tendency to spontaneous attempts to adopt the perspectives of other people and see things from their point of view while the fantasy refers to the tendency to identify with characters in movies, novels, plays and other fictional situations.

Collectivism

Collectivism represents an orientation for a distal social system in which individuals are expected to take care of extended relatives or members of in-group. Members are considered a part of the social unit, and mutual obligations and relationship within a group are necessary in a collectivist society. (Hofstede, 1980; Schwartz & Bilsky, 1990; Triandis, 1995). Fate, goals, or values of a group are valued higher than those of each.

Individualism

Individualism refers to proximal social framework consists of narrowly defined primary groups and negotiated social relations. Individuals are expected to take care of selves or their immediate family members. Focus lies on individual autonomy, self-fulfillment, rights above duties, personal accomplishment, as well as concerns for oneself and immediate family (Hofstede, 1980; Schwartz & Bilsky, 1990; Waterman, 1984).

Horizontal Collectivism

Horizontal collectivism refers to a tendency to interdependence and sociability but does not yield one's own interest easily to authority within group (Triandis, 1995).

Vertical Collectivism

Vertical Collectivism refers to a tendency to interdependence and integrity with in-group members, but a tendency to emphasize hierarchy and yield one's interest for in a group's goal (Triandis, 1995).

Horizontal Individualism

It refers to desire to be unique and distinct from other group members without striving for a hierarchical status in a group (Triandis, 1995).

Vertical Individualism

It represents a desire for uniqueness, obtaining particular status, and one's strive to achieve this goal via individual competition (Triandis, 1995).

Acculturation

Acculturation is the term used to describe the process of change and adaptation of social norms, language, value, and behavior when a merger of two or more cultural systems takes place. Acculturation occurs on personal (micro) and institutional (macro) levels (Berry, 1980).

CHAPTER III

METHOD

This study used a cross-sectional, quasi-experimental design to examine the impact of culture on youths' empathy development. The first step was to validate the construct of the IRI. For this purpose, factor analytic procedure was undertaken. Regression analysis was applied using cultural orientation as a predictor variable to predict the variance of empathy constructs yielded in each group. For the intended factor analyses, data from 280 Korean Americans were collected to match the optimal sample size; 10 times the number of index items in a measure (Comrey & Lee, 1992). Since the IRI is composed of 28 items, at least 280 participants were needed to have sufficient power. Only 217 Korean Americans met the inclusion criteria. In the Korean sample, data from 416 adolescents were included in the analysis.

Prior to analysis, datasets were visually examined to remove any unusual outliers, incomplete responses, or random responses, using box plots and histograms. Of the included data, two cases had more than 10% non-response items, so they were dropped to avoid biased results (Bennett, 2001). As the results, data from 215 Korean Americans and 416 Koreans were included in the analysis.

Participants

Korean American Sample

This researcher collected the Korean American data with parental permission in two Korean churches in the Greater Houston Area (GHA) during spring 2012. The participants did not have a history of psychiatric disorders or had not received

psychotherapy services in the past. Following criteria were used to select the Korean American participants. The participants had to meet at least one of the following criteria:

1. The participants were American-born, second generation from Korea.
2. If they were born in Korea, they came to the U.S. at an early age and started the first grade in the U.S.
3. If they did not attend elementary school in America, they had lived in America for at least five years and attended middle and high school in the U.S.

Korean Sample

The Korean data were extant data and exempted from the review of the Institutional Review Board (IRB) at Texas A&M University. The participants attended middle school or high school in the public education system, in Korea. The participants had no history of psychiatric disorders and had not received psychotherapy services in the past. The participants included 289 high school students and 94 middle school students.

Demographic Information

Demographic information for the participants of the two groups is presented in Table 2. An attempt was made to match the participants' demographic characteristics, such as age, academic level, and socioeconomic status between groups. Of the Korean American and Korean participants, both were boys and girls ages 11 to 17 who were attending academically outstanding public schools located in middle class neighborhoods. The Korean group was significantly younger than the Korean American group, $t(628) = 8.30, p < .001, d = 1.45, 95\% \text{ CI } [.97, 1.57]$. Chi-Square analysis

indicated a significant difference in the proportion of boys/girls between the two groups, $\chi^2(2, N=628) = 25.41, p < .001$. The gender difference reflects the reality in high school population, in South Korea.

Table 2

Participants' Demographic Information

	Korean (N=416)	Korean American (N=215)
Male (Percentage)	285 (68.51%)	104 (48.37%)
Female(Percentage)	131 (31.49%)	111 (51.63%)
Average Age in year (Standard Deviation)	14.67 (1.88)	15.92 (1.78)
Middle School (Percentage)	127 (30.5%)	121 (56.3%)
High School (Percentage)	289 (69.5%)	94 (43.7%)
Estimated Socioeconomic Status ^a	Middle class	Middle class

Note. ^a Estimated on the areas of residence, school, and parents' occupations

The majority of Korean American participants resided in suburban areas and attended schools ranked as exemplary by the Texas Education Agency. The Independent School Districts (ISDs) located in the GHA included Katy ISD (32%), Spring Branch ISD (32%), Cy Fair ISD (15%), Houston ISD (6%), Fort Bend ISD (4%), and Klein ISD (4%). Approximately 7% of the students attended charter schools, international schools, parish schools, or schools outside of the Greater Houston Area (see Table 3).

The Korean data were collected from two high schools and one middle school which were recognized for their academic advancement and the families' middle class status (see Table 3). These schools were located in middle class neighborhoods, in

metropolitan cities (Seoul and Daegu) of South Korea. According to the Korean Educational Development Institute (Korean Educational Development Institute [KEDI], 2012), Seoul ranked the highest ratio of students study abroad. In particular, a news article from Daily Jungang reported that the Kangnam school district in Seoul had the highest ratio of students study in the U.S. and Canada ("Students study abroad", 2010). Soosung school district is known for its outstanding performance that is equivalent to Kangnam district (KEDI, 2012). The socioeconomic status of the majority of Korean participants was estimated as middle class, although detailed information about their parents' occupations and income levels was not accessible.

Table 3

Distribution of the Korean American Participants' School Districts

Student Distribution	<i>N</i>	%
Korean American		
Katy ISD	67	32
Spring Branch ISD	67	32
Cy Fair ISD	32	15
Houston ISD	13	6
Fort Bend ISD	9	4
Klein ISD	9	4
Charter schools, International Schools, Parish Schools	18	7
Total	215	100
Korean		
Gangnam School District	142	34.1
Soosung School District	273	65.6
Total	416	100

Note. ISD=Independent School District; no = Number of the participants, *N* = number of case; % = percentage

The majority of Korean American parents' occupations were professionals, such as engineers (22.5%), medical professionals (doctors, medical researchers, nurses, and pharmacists) (9.3%), teachers (7%) or owners of a small business such as a convenience store (21.4%). Other professions included manager, pastor, real estate agent, sales person, and waitress. Fourteen percent of the participants did not provide information on occupation. As presented in Table 4, more than 70% of the participants' parents had professional occupations or owned a business.

Table 4

Socioeconomic Status of the Korean American Participants Identified through the Parents' Occupations

	Parents' Occupation	%
Engineers	48	22.5
Business owners	46	21.4
Medical professionals (doctors/ medical researchers/nurses, pharmacists, acupuncturists)	20	9.3
Professors (11) and teachers (4)	15	6.8
Managers	10	4.7
Lawyers (3)/accountants (2)/bankers (2)	7	3.2
Sales	5	2.4
Pastors	3	1.4
Realtor	4	2.0
Mechanics	4	2.0
Public officers (police/post office)	2	1.0
Waitress, clerk	4	2.0
Etcetera	16	7.0
No answers	30	14.0
Total	215	100

The Korean American participants provided more detailed demographic information including the duration of stay in the United States, subjective language

proficiency for both their native language and English (see Table 5 and Table 6).

Korean-born participants were 42.3%, and American-born participants were 57.7%. The average age of arrival in the U.S. of the Korean-born students was 2.3 years with a standard deviation of 3.4 years. The average time since the arrival of the Korean-born students was 9.43 years with a standard deviation of 2.8 years.

Table 5

Related Demographic Information of the Korean American Participants

	American Born (N=124)		Korean Born (N=91)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Stay Duration (Years)	14.60	2.00	9.34	2.80
Age of arrival	n/a		2.3	3.4

Table 6

Language Fluency of the Korean American Participants

	<i>N</i>		<i>%</i>	
	Korean	English	Korean	English
Not at all	38	1	17.2	.5
Can speak a little bit	69	3	32.1	1.4
Average	14	2	6.5	.9
A little bit fluent	63	31	29.3	14.4
Very fluent	31	178	14.4	82.8
Total	215	215	100	100

Approximately 23% of the participants identified themselves as Korean, 3.3% as American, and 72% as Korean American (see Table 7). Participants' language fluency

was measured for both English and Korean on a 5-point Likert scale: 1=not at all to 5=very fluent. The majority of participants (98%) reported their fluency in English above 4, while 50% of the participants reported their fluency in their native language less than 2.

Table 7

Subjective Identity of the Korean American Participants

	<i>N</i>	%
Korean	49	22.8
American	7	3.3
Korean American	155	72.1
Other	4	1.9
Total	215	100.0

Note. *N* = Number of Case; % = Percentage

Measures

Demographic Information Questionnaire

The Korean American participants completed a demographic questionnaire. Questions included parents' occupation, language preference, language fluency in Korean and English, and duration of stay in the U.S.

The Interpersonal Reactivity Index

This study used the IRI that is a self-report questionnaire comprised of 28 items. The IRI has a four-factor structure (Davis, 1980). Perspective Taking (PT) measures an attempt to see things from others' viewpoints. Empathic Concern (EC) assesses a tendency to express one's warmth, concerns, and compassion toward others in difficulty.

Personal Distress (PD) measures negative emotional response when observing others in troubled situations. Fantasy (FS) measures one's tendency to identify with characters in fictional situations. The IRI was originally developed for use with adults (Davis, 1980), and the factor structure was established initially using Confirmatory Maximum Likelihood Factor Analysis (CFA) for both male and female college students. Internal reliabilities for the four factors (subscales) ranged from 0.70 to 0.78, and test-retest reliability over a 60–75 day period ranged from 0.61 to 0.81. Test-retest reliabilities over two years in adolescence ranged from 0.50 to 0.62 (Davis & Franzoi, 1991). The PT component was highly correlated with external measures of interpersonal sensitivity and self-esteem while EC and PD were the most highly correlated with external measures of emotionality (Davis, 1980). Litvack-Miller, McDougall, and Romney (1997) used both oblique Exploratory Factor Analysis (EFA) and CFA with 478 children from grades 2 to 6 and found the four-factor structure similar to Davis's original model useful.

An accepted technique for ensuring conceptual equivalence across languages is the use of back-translation (Brislin, 1970; Ozolins, 2009). This researcher translated the original index into Korean, and then English. The back-translation was conducted by a Korean faculty member in the school psychology program in a university in the U.S. After back-translation, the original and back-translated measures were compared, and the Korean translation was corrected in order to reflect the intent of wording in the original version as noted by Davis (1980); the original and translation are provided in Appendix A.

Measure of Individual's Cultural Orientation

The cultural orientation scale developed by Singelis and colleagues (Singelis et al., 1995) was used to examine the relation between internal cultural orientation and empathy constructs pertaining to the Korean and Korean American groups. This measure is composed of four subscales with eight items for each subscale. Singelis et al., (1995) indicated that a four-factor structure was the best fit: vertical collectivism (VC), vertical individualism (VI), horizontal collectivism (HC), and horizontal individualism. (HI).

- HC measures the extent of one's tendency toward interdependence and sociability, but individuals "do not submit easily to authority."
- VC measures the extent to which one emphasizes and identifies with the integrity of in-group goals and competition with out-groups.
- HI measures the extent of one's desire to be unique and distinct from other group members without striving for hierarchical status in a group.
- VI measures one's desire to be unique, achieve outstanding status, and strive to achieve this goal via individual competition.

Each item was scored on a 7-point scale; 0=not at all, to 7=very much.

Reliabilities of the four factors ranged from 0.60 to 0.77 in the U.S. (Singelis et al., 1995). An equivalent four-factor structure was extracted in Korean college students (Triandis, 1998). Choi (2006) reported that Cronbach's Alpha for each factor ranged

from 0.66 to 0.71 in Korean middle and high school students (see Appendix B for a copy of the measure).

Cortes, Rogler, and Malgady Bicultural Scale

The Cortes, Rogler, and Malgady Bicultural Scale (Mezzich et al., 2009) assess the extent to which individuals identify with Korean and American identity. The CRM-BS consists of 20 items that ask about language, values, entertainment, and food consumption in the original culture and the host culture. Each item is scored on a 4-point scale with total scores ranging from 0 to 60. The first 10 items ask about one's identification with the original culture, and the second 10 items ask about one's cultural identification with the host culture. The authors of this measure suggested a cutoff score 15 for each subscale and use of the following culture identification indexes to categorize cultural identity:

- Bicultural, or integrated: ≥ 15 on both the original and host culture.
- Assimilated: < 15 on the original culture, ≥ 15 on the host culture.
- Culturally traditional (segregated): ≥ 15 on the original culture < 15 on the host culture.
- Culturally marginalized: < 15 on both the original culture and the host culture.

Internal structural reliability of this scale is sound (Mezzich et al., 2009). Test-retest reliability was 0.78 in the original culture group and 0.82 in a mainstream U.S. professional group (Mezzich et al., 2009). Internal consistency was satisfactory, with an estimate of Cronbach's alpha of 0.88 in the original groups and 0.80 in the mainstream

group. Construct validity measured via a comparison of intergenerational mean scores on subscales indicated that as generations became older, the mean score for original culture decreased and the score for the host culture increased (Mezzich et al., 2009). A copy of the measure is provided in Appendix C.

Procedure

This study received approval from the Institutional Review Board (IRB) process at Texas A&M University. The data for the study came from two separate datasets. The Korean American data were composed of responses to four questionnaires. First, demographic questionnaires were used to obtain demographic information such as time since the arrival in the U.S., language preference, and self-identity relating to nationality. Second, the IRI measured dispositional empathy. Third, the Vertical-Horizontal Individualism Collectivism Scale asked about participants' cultural orientation. Lastly, the CRM-BS measured cultural identity. All the protocols were obtained after obtaining parental permission.

Two major Korean churches in the Greater Houston Area participated in this study. The researcher delivered protocol packets to the churches in person. No monetary reward was provided for participating in the study. Sunday school teachers distributed the protocols with parent permission form. When their parents consented on the permission forms, students completed and returned the research protocols to the Sunday school teachers. Upon notification of completion of the data collection by the church, the researcher retrieved the protocols from the church. Data was collected during spring 2012.

The Korean dataset was drawn from extant data obtained in South Korea with the assistance of the department of psychology at Pusan National University. This dataset contained the two protocols: the IRI and the Triandis' cultural orientation scale. The participants' personal information was de-identified, but age, gender, and school grade were available.

Data Analyses

Confirmatory Factor Analytic (CFA) Procedures

CFA is a part of structural equation modeling, and a suitable statistic method to test relationships between observed variables and their underlying latent constructs (Schumacker & Lomax, 1996). The fit indices signify acceptability of the resulting model of the analysis. In accordance with previous studies that attempted to confirm the factor structure of the IRI (Davis, 1980; Litwack-Miller, McDougall, & Romney, 1997), this study applied CFA with the maximum likelihood method to maximize the sum of the variance of the squared loadings (Davis, 1980), as well as the Principal Axis method. The Analysis of Moment Structures (AMOS) version 20.0 and SPSS 20 were used for the analysis.

Model Fit Index

The Goodness of Fit Indices (GOF) considered include the relative ratio (Chi-square divided by degree of freedom), the Comparative Fit Index (CFI), the Normed Fit Index (NFI), the Root Mean Square Residual (RMSEA; Browne & Cudeck, 1993), and the Akaike's Information Criterion (AIC). Using the GOF, the cutoff values provided suitable levels of Type I error rates while minimizing Type II error rates (Hu & Bentler,

1999). The acceptable cutoff value for the relative ratio, suggested by Carmines and McIver (1981), is less than 2.0. The CFI and NFI range from 0 to 1; the acceptable values are above 0.95. A value closer to 1 is ideal (Hu & Bentler, 1999). The NFI is an indicator of the difference of the null model and that of the target model (Byrne, 1994). The NFI value of 0.9 indicates the target reached a 90% improvement of the null/independence model. The CFI compares the fit of the target model to a hypothetical model in which the variables are assumed uncorrelated. The RMSEA represents the differences between the observed and predicted covariance matrix for which zero indicates a perfect fit. The ideal RMSEA value is 0.05 or less. Values between 0.05 and 0.08 indicate a reasonable fit of the model. To compare the fit among modified models, the AIC was used to determine a best fit.

Exploratory Factor Analysis

When CFA did not confirm a reliable factor structure (i.e., when the GOF indices failed to reach acceptable values), EFA was sequentially applied to identify the unique factor structure embedded in the datasets. EFA is considered applicable when there is no firm evidence for the number of common factors and the relationships between measured variables and latent structure (Fabrigar, Wegener, MaCallum, & Strahan, 1999). Byrne (1994) indicated that EFA is designed for a situation where links between the observed and latent variables are unknown or uncertain.

Multiple Regressions

To determine the possible influence of an individual's internal cultural orientation on empathy features by group, multiple regression analysis was used. The

four dimensions of personal cultural orientations (i.e., HC, HI, VC, VI) were used as predictors of EC and FS for Korean American group and PT, FS, and PD in Korean group.

CHAPTER IV

RESULTS

The purpose of this study was to determine the cultural influence on youth empathy development using the IRI. Validation of the IRI construct in two datasets was the prerequisite process to be able to answer the proposed research questions. Two individual protocols that had more than 10% of non-response items were dropped from the dataset (Bennett, 2001) prior to analysis. Rate of missing items in the resulting datasets was unsubstantial, ranging from a low of 2 % to 6% per item. To avoid a possible bias that might take place when an imputation method is applied. The pairwise deletion option in SPSS was chosen to manage any missing variables.

Preliminary data examination was undertaken to ensure the reliability of the measures. This procedure also aimed to see if the assumptions needed for the analyses were met. Normality testing of the datasets examined the skewness and kurtosis of the variables (See Appendix D). Of the 28 variables included in the IRI, 14 variables had the critical ratio of skewness above 2.0 or less than -2.0, indicating non-normality of the dataset. Multivariate kurtosis values also indicated non-normality of the dataset. The Kolmogorov-Sminov and Shapiro-Wilk tests indicated significant deviation of the data from a normal distribution; significance of the test was below 0.05. Consequently, data transformation was attempted by applying the Root Square Method in an attempt to reach normality of the data. However, analysis with the transformed data resulted in inadmissible values of factor loadings and variances in regression statistics.

The last attempt to compensate the non-normality of the data was to apply Bootstrap method in AMOS. Bootstrap is a resampling method that has more accurate Type 1 error rates and higher power than a single sample. A suggested practical number of Bootstrap runs is usually 500 or 1000 (Cheung & Lau, 2008). This method did not correct the problems. Ordinal variables often violate normality assumptions; however, it has been reported frequently that treating a 5-point Likert scale as a continuous variable is not likely to result in substantial impact on outcomes (Babakus, Ferguson, & Joreskog, 1987; Dolan, 1994; Johnson & Creech, 1983; Hutchinson & Olmos, 1998). In addition, a literature review involving factor analysis of questionnaires that used ordinary scales did not endorse data transformation; most used raw data. That said, no transformation of the data was used.

Research Question 1

Is the IRI factor structure of the Korean data equivalent to the original structure proposed by Davis (1980)? Is the IRI factor structure in Korean American students the same as the original structure proposed by Davis?

It was hypothesized that the four-factor structure as proposed by Davis (1980) would be extracted in both Korean and Korean American samples.

Internal reliability of the original IRI scales ranged from 0.60 to 0.79 in the Korean dataset and from 0.59 to 0.68 in the Korean American dataset (see Table 8).

Table 8

Cronbach's α for the Original IRI in the Korean and Korean American Group

Scales	Korean (N=416)	Korean America (N=215)
Whole Scale	0.78	0.77
Fantasy	0.79	0.62
Empathic Concern	0.69	0.68
Perspective Taking	0.60	0.67
Personal Distress	0.66	0.59

Use of Confirmatory Factor Analysis for Validation Process

CFA is a widely applied method in testing hypothesized relations among ordinal variables (Flora & Curran, 2004). Maximum likelihood estimation is the default option in CFA when using AMOS. The initial iteration of CFA and the subsequent progressive model modification process did not successfully converge on the equivalent original structure. At each stage of model modification process, three AMOS indices were considered: the Modification Indices (*MI*), the Standardized Residual Covariances (SRC) Indices, and factor loadings (R^2). The magnitude of the MI usually indicates the extent of model improvement when a path is added between covariate variables or a factor to variables. In this study, the items with high MI were removed instead of adding a path between them.

SRC values fall between -2 to 2 when a model is close to ideal (Joreskog & Sorbom, 1984). Since many variables in the current datasets had SRC values higher than 2.00, items with SRC values higher than 3.00 were removed at the outset. Lastly, factor loadings (R^2) were considered to identify the percentage of variance explained by

each of the observed variables. The items that had factor loadings less than 0.20 were removed consistent with the general cutoff correlation value for weak relationship of less than 0.20 (Cohen, 1988).

Table 9

Progressive Model Modification Using Confirmatory Factor Analysis in the Korean and Korean American Datasets

	Item Removed			Relative Ratio	NFI	CFI	RMSEA	AIC ^b
<u>Korean American (N=416)</u>								
Original Model		799	344	2.49	.52	.65	.08	979
1st Modified Model	1, 2, 3, 7, 13, 15, 18, 19	321	164	1.96	.71	.83	.07	453
2nd Modified Model	8, 12, 14, 24	176	98	1.8	.80	.90	.06	284
<u>Korean (N=215)</u>								
Original Model		1025	344	2.98	.59	.65	.73	1433
1st Model	1, 2, 3, 7, 13, 15, 18, 19	416	164	2.55	.79	.86	.06	550
2nd Model	8, 12, 14, 24	230	98	2.35	.86	.91	.05	383

Note. GOF= Goodness of Fit; ^a GOF indicates acceptable index range; ^b Decreasing value.

Since the GOFs in the initial iteration were not admissible, model modification was subsequently undertaken in order to improve the GOFs by considering the three modification indices as described in table 9. As a result, eight items were removed at this stage. The resulting model with 20 items showed overall improvement of the GOFs; yet they were still not admissible. When this modified model in Korean American dataset was applied to the Korean dataset, results were the same.

In the next step, four more items were removed when their SRC values were higher than 3.00 or the MI value was extremely large or the R^2 value was less than 0.20. Although the overall model fit gradually improved, removal of 43% of the original items significantly risked internal reliability of the modified model and not all fit indices were acceptable. The internal reliability of this model with 16 remaining variables ranged from 0.55 to 0.80. CFA did not confirm the evidence of firm relationships between measured variables and the latent structure for the two datasets. The summary of the model modification process is presented in Table 9.

Exploratory Factor Analysis on Combined Data

Subsequently, since the CFA did not yield an acceptable model fit, EFA was done on the combined dataset. Previous studies involving validation of IRI used the maximum likelihood method to maximize explained variance (Fabrigar, et al., 1999); yet, the principal factor method is suggested to be used when the multivariate normality assumption was violated (Fabrigar et al., 1999). As to the rotation method, oblique rotation was suggested when correlation is assumed among the factors or variables; this method renders a theoretically more precise solution (Costello & Osborne, 2005). Thus,

both maximum likelihood and principal axis methods were applied to identify a better model fit. The promax rotation method was applied. The initial iteration extracted seven factors that had Eigenvalues greater than 1.00. Referring to the scree plot and the Eigenvalues (greater than 2.00), four- and five-factor solutions were extracted. A four-factor structure yielded acceptable GOFs, but not the five-factor structure. Then, to confirm the validity of this four-factor model in each Korean and Korean American data, CFA was applied. However, the result did not support an acceptable reliability of this model. In particular, items number 3 and 8 had extremely low factor loadings, smaller than 0.1 in both groups.

In conclusion, EFA did not confirm a reliable factor structure in the combined dataset. This result might indicate differences in the datasets. Thus, EFA was conducted with the Korean data and the Korean American data separately to determine empathy constructs that might pertain to each group.

EFA on the Korean Dataset

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.79) and the Bartlett Test of Sphericity ($\chi^2 = 2043.87$, $df = 201$, $p < 0.001$) indicated adequacy of the Korean sample for EFA. The outputs of the initial iteration are presented in Table 10. Based on the scree plot and the initial solution that extracted seven factors with Eigenvalue greater than 1.00, four- and five-factor extractions were undertaken. Removal of variables that significantly loaded on multiple factors increased the interpretability of the factors on the Korean sample.

Table 10

Four- and Five-Factor Solutions Using EFA in the Korean Dataset

	<i>no.</i>	χ^2	<i>df</i>	<i>Sig.</i>	%
Four-Factor Solution	22	273.4	116	.01	50
Five-Factor Solution	21	163.17	115	.05	57.97

Note. N=416; *no*=Number of items; χ^2 = Chi-Square; *df*= degree of freedom; *Sig.* = significance; % = Variance explained

The four-factor solution with 22 items was conceptually similar to the original four-factor model, and the explained variance was 50%. The five-factor solution with 21 items showed a greater variance explained, 54.82% than the four-factor solution. Hence, the five-factor solution was considered as the optimal solution at this stage of analysis. Of the five factors, the first factor consisted of two items, numbers 7 (tendency to imagine oneself in a fictional situation) and 12 (self-oriented negative emotional response when observing others' plights). The internal reliability of this factor was 0.57, which was not acceptable. The second factor, consisting of four items, 2, 4, 14, and 18, dealt with one's tendency to experience concern and disturbance for others in trouble, similar to the concept of Empathic Concern (Davis, 1980), yet the internal consistency of this factor ($\alpha=.23$) was not acceptable. The third factor, consisting of items 1, 5, 16, 23, and 26, represented one's tendency to identify with fictional characters corresponding to the original FS factor (Davis, 1980). These items contained statements such as, "I daydream and fantasize, with some regularity, about things that might happen to me," "I really get involved with the feelings of the characters in a novel," and "After seeing a

play or movie, I have felt as though I were one of the characters.” The internal reliability of this factor was acceptable ($\alpha=.78$).

The fourth factor consisted of five items that correspond to the original Personal Distress factor (Davis, 1980). Items contained statements such as “In emergency situations, I feel apprehensive and ill-at-ease” and “I feel sometimes helpless when I am in the middle of a very emotional situation.” The internal consistency was acceptable ($\alpha=.70$). The fifth factor consisted of the four items that related to one’s tendency to take others’ perspectives intentionally and purposefully. Thus, this factor seems comparable to the Perspective-Taking (Davis, 1980). This factor contained statements such as “I sometimes try to understand my friends better by imagining how things look from their perspective,” “When I am upset at someone, I usually try to put myself in his shoes for a while,” and “Before criticizing somebody, I try to imagine how I would feel if I were in their place.” The internal consistency was acceptable ($\alpha=0.74$) (see Table 11). The pattern matrix displaying the factor loadings is contained in Appendix 6.

Table 11

Five-Factor Solution in the Korean American and Korean Datasets

	Korean-American (N = 215)		Korean (N = 416)	
	Items	α	Items	α
Factor 1	2, 9, 20, 10, 21	0.60	7, 12,13	0.57
Empathic Concern	4, 14, 15, 18	0.68	2, 4, 14, 18	0.23
Fantasy	5, 12, 16, 26	0.74	1, 5, 16, 23, 26	0.78
Personal Distress	24, 27	0.56	6, 10, 17, 24, 27	0.70
Perspective Taking	25, 28	0.67	11, 21, 25, 28	0.74

Note. α = Cronbach's Alpha

EFA on the Korean American Dataset

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.72) and the Bartlett test of Sphericity were significant, indicating suitability of this dataset for EFA ($\chi^2=1585.63$, $df=378$, $p<0.001$). The initial iteration of the Korean American data yielded seven factors, and the total explained variance was 54.63%. The four factors had Eigenvalues higher than 2. Since the four factors had the rotation sums of squares loading higher than 2, and the scree plot indicated a discrete curve near four and five factors, four- and five-factor solutions were sequentially extracted after removing items that loaded on the sixth and seventh factor or loaded on multiple factors (i.e., 3, 9, 15, 19, 18, 20, 22).

The results of this iteration indicated that the four-factor solution explained 50% of the variance; however, the goodness of fit was not satisfactory ($\chi^2=111$, $df=74$, $p<0.02$). The five-factor solution with 17 variables improved GOF to an acceptable level ($\chi^2=77.68$, $df=61$, $p<0.07$). The cumulative rotation sum of squares loading was 57.97. Thus, this 5-factor model was considered as the final solution (see Table 11).

The first factor seemed to depict one's negative emotional response to external experience and consisted of five items (i.e., 2, 9, 20, 10, 21). This factor did not clearly correspond with any of the four factors that Davis (1980) suggested, and the internal reliability was not acceptable ($\alpha=.57$). The second factor consisted of three items that represented a tendency to experience feelings of concern and discomfort for others in trouble, and a single item represented a tendency to take others' perspectives (i.e., 4, 14, 15, 18). This factor did not thoroughly communicate the sense of warmth or passion of

Empathic Concern (Davis, 1980). It is a close approximation. The internal consistency was acceptable ($\alpha=.68$). The third factor, consisting of four items (i.e., 5, 12, 16, 26) referred to one's tendency to identify with fictional characters depicted in a novel, drama, or movie and represented one's tendency to fantasize with a fictional situation. This factor is the closest to Davis' (1980) Fantasy factor. The internal consistency of this item was acceptable ($\alpha=.74$). The fourth and the fifth factors consisted of only two items, representing self-oriented distress and perspective-taking, respectively. A factor consisting of only two items was not reasonable, and the internal reliability of these factors was not acceptable.

In conclusion, the model proposed by the IRI did not fit the current datasets using CFA. Thus, a group comparison on the IRI scores was not able to be addressed. On EFA combined, no factor solution emerged. For separate EFAs, an overall model was not identified that fit the data and explained aspects of empathy with internal reliability. Only partial constructs pertaining to each group were separately extracted with an acceptable internal consistency.

Research Question 2

If the extracted factor structures are equivalent and a group comparison can be made, are there any group differences on the factor scores between the Korean and the Korean American groups?

It is hypothesized that although equivalent factor structures may be extracted in both groups, there may be a certain degree of variation between the two groups' scores on IRI.

A group comparison on the IRI scores was not able to be addressed. EFA yielded only reliable constructs of FS, PD, and PT for the Korean group, and FS and EC for the Korean American group. Only three items were the same for both groups on the FS factor (5, 16, 26). Given variations in the measurement of FS as the only shared construct, no group comparisons were made.

Research Question 3

How is the students' cultural orientation related to empathy development? How will the four groups' (i.e., VI, VC, HI, HC) empathy scores on each factor different? Assuming the Korean and Korean American groups' factor structure of the IRI will be equivalent to the original structure, it is hypothesized that the scores on PT and FS will be in the following order: $VC > HC > VI > HI$. EC and PD on the IRI will be in the reverse order.

Since the factor structures extracted in each group were not equivalent to the original, only the empathy constructs pertaining to each group were used to answer this question. EC and FS were considered for the Korean American group while PT, FS, and PD were considered for the Korean group. Preliminary data examination was undertaken to ensure reliability of the Triandis's cultural orientation scale, as well as, to see if the assumptions needed for analysis were met. Internal reliability of the Triandis's cultural orientation scale was 0.78 for both groups (see Table 12). The internal reliability of the subscales ranged from 0.56 to 0.78 in the Korean dataset and from 0.60 to 0.69 in the Korean American dataset.

Table 12

Internal Reliability of Cultural Orientation Subscales

	Korean American (N = 215)	Korean (N = 416)
Whole Scale	.78	.78
Horizontal Individualism	.60	.56
Horizontal Collectivism	.69	.76
Vertical Individualism	.66	.63
Vertical Collectivism	.63	.58

There was no multicollinearity indicated in the predictor variables of ; tolerance values were all above 0.6 and Variance Inflation Factor (VIF) statistics were less than 2.0. The Durbin-Watson statistics were less than 2.00 and higher than 1, indicating no serial correlation among the residuals. Casewise diagnostics indicated that no significant outlier that might have an impact on the coefficients existed; the maximum Cook's Distance was insubstantial (Cook's Distance= 0.06). Thus, there was no non-linearity or heteroscedasticity evidenced. R^2 values were used to estimate the magnitude of effect sizes in regression analysis. R^2 values between 0.02 and 0.12 are considered as a small effect size. R^2 values between 0.13 and 0.29 are medium, and R^2 values higher than 0.30 as large effect size (Cohen, 1980). The current results should be interpreted with caution because the resulting confidence intervals of the outcome had a negative lower limit and positive upper limit values.

Prior to conducting a regression analysis with the predictor variables, possible correlation among age and the dependent variables were inspected (Table 13). There was no correlation indicated between age and the three dependent variables (PT, FS, and PD) in the Korean group, but correlation between the PT and FS, FS and PD were indicated.

Table 13

Correlations among Age, Gender, Perspective Taking, Fantasy, and Personal distress in Korean Dataset

	Age	PT	FS	PD
Age	-			
PT	-.03	-		
FS	-.01	.22**	-	
PD	.08	.05	.27**	-

Note. N = 416, PT = Perspective Taking, FS = Fantasy, PD = Personal Distress, ** $p < .01$

In the Korean American group, age was significantly correlated with FS (Table 14). To control the influence of age on FS, hierarchical multiple regression was conducted in the following analysis, in the Korean American group only for FS. Age emerged as a significant variable at stage two when four cultural orientations and collectivism-individualism were entered as predictors (Table 15, 16, and 17).

Table 14

Correlations among Age, Gender, Empathic Concern, and Fantasy In Korean American Dataset

	Age	EC	FS
Age	-		
EC	.08	-	
FS	-.14*	.01	-

Note. N = 215, * $p < .05$

Table 15

Predicting Empathic Concern and Fantasy from the four cultural orientations in the Korean American Dataset

	Empathic Concern		Fantasy	
	B	95% CI	B	95% CI
Constant	15.86***	[12.42, 19.30]	8.30****	[-.23, 8.65]
Age ^a	-	-	-.29**	[-.56, -.02]
HC	.14**	[.07, .22]	.13**	[.03, .23]
VC	.07	[.00, .14]	.15	[-.04, .15]
HI	-.13**	[-.20, -.06]	.04	[-.05, .13]
VI	-.13**	[-.18, -.07]	.04	[-.08, .16]
R ²	.27		.01	
F	18.79**		5.63**	

Note. N = 215; ^a Age variable was not used in predicting Empathic Concern; CI = confidence interval; HC = horizontal collectivism; VC = vertical collectivism; HI = horizontal individualism; VI = vertical individualism ** $p < .01$, *** $p < .001$

Predicting Empathic Concern and Fantasy from Four Cultural Orientations in the Korean American Group

The datasets met the basic assumptions of regression analysis, and the results are interpretable. Four variables (i.e., HC, VC, HI, VI) significantly predicted variance in EC with a medium effect size in the Korean American group (see Table 15). With the exception of vertical collectivism, all three predictors significantly predicted variance in EC. Specifically, horizontal collectivism was the positive and significant predictor of empathic concern, while both horizontal individualism and vertical individualism negatively predicted variance in EC. For FS, age was significant even after controlled in predicting FS. Only age and horizontal collectivism was significant in predicting FS.

Predicting Empathic Concern and Fantasy from Collectivism and Individualism in the Korean American Group

Collectivism, by its nature, values interdependence and sociability among group members, while individualism values self-reliance and emotional distance from group members (Triandis, 1995, 2001). Two variables of dichotomous dimension of collectivism and individualism were entered as predictors. Collectivism and individualism were both significant predictors of EC, with a medium effect size (see Table 16). However, collectivism was a positive predictor, while individualism was a negative predictor. Individuals who scored high on collectivism also scored high on EC, but those who scored high on individualism scored low on E. For FS, only age and collectivism were significant predictors with a small effect size.

Predicting Empathic Concern and Fantasy from Horizontal and Vertical Dimension in the Korean American Group

Horizontal orientation values equality while vertical orientation values hierarchy within a group (Triandis, 1995, 2001). Horizontal and vertical dimensions were not significant in predicting EC. Horizontal orientation significantly predicted FS with a small effect size (see Table 17).

Table 16

Predicting Empathic Concern and Fantasy from Collectivism and Individualism in the Korean American Dataset

Variables	Empathic Concern		Fantasy	
	B	95% CI	B	95% CI
Constant	16.03	[12.67, 19.39]	8.48**	[2.72, 14.23]
Age ^a	-	-	-.26*	[-.53, -.00]
Collectivism	0.11**	[0.07, 0.14]	0.10***	[.05, 0.14]
Individualism	-0.13**	[-0.16, -.09]	0.01	[-.03, 0.06]
R ²	0.23		0.01	
F	37.02**		8.57***	

Note. N = 215; ^a Age variable was not used in predicting Empathic Concern

* $P < .05$, ** $P < .01$, *** $P < .001$

Table 17

Predicting Empathic Concern and Fantasy from the four Horizontal and Vertical orientations in the Korean American Group

Variables	Empathic Concern		Fantasy	
	B	95% CI	B	95% CI
Constant	14.79	[10.86, 18.72]	7.48	[1.69, 13.27]
Age ^a	-	-	-.26	[-.53, .00]
Horizontal	0.04	[-0.01, 0.09]	0.10*	[.04, 0.15]
Vertical	-0.04	[-0.09, 0.00]	0.01	[-0.03, 0.07]
R ²	0.02		0.01	
F	2.32		7.50***	

Note. N=215; ^a Age variable was not used in predicting Empathic Concern

* $P < .05$, *** $P < .001$

Predicting Perspective Taking, Fantasy, and Personal Distress from Four Cultural Orientations in the Korean Group

Four cultural orientations significantly predicted all three empathy constructs in the Korean group, with a small effect size for each predictor (see Table 18). Horizontal collectivism was the only significant predictor for PT. Horizontal collectivism and horizontal individualism significantly predicted FS, with a small size effect. PD was significantly predicted by vertical collectivism and horizontal individualism.

Table 18

Predicting Perspective Taking, Fantasy, and Personal Distress from the four cultural orientations in the Korean Dataset

	Perspective Taking		Fantasy		Personal Distress	
	B	95% CI	B	95% CI	B	95% CI
Constant	5.86**	[3.09, 8.62]	7.49**	[4.10, 10.88]	15.94**	[12.71, 19.17]
HC	0.15**	[0.10, 0.20]	0.12**	[0.06, 0.19]	-0.03	[-0.09, 0.03]
VC	0.01	[-0.05, 0.07]	-0.04	[1.10, 0.03]	0.07*	[0.00, 0.14]
HI	0.04	[-0.01, 0.10]	0.15**	[.08, 0.22]	-0.08*	[-0.15, -0.02]
VI	-0.02	[-0.07, 0.10]	0.04	[-0.03, 0.10]	0.05	[-0.00, 0.12]
R^2	0.11		0.11		0.04	
F	12.54**		12.76**		3.79**	

Note. N = 416. CI = confidence interval; HC = horizontal collectivism; VC = vertical collectivism; HI = horizontal individualism; VI = vertical individualism

* $p < .05$, ** $p < .01$

Predicting Perspective Taking, Fantasy, and Personal Distress from Collectivism and Individualism in the Korean Group

Collectivism was a significant predictor of both PT and FS, with a small effect size (see Table 19). Collectivism and individualism did not predict PD.

Table 19

Predicting Perspective Taking, Fantasy, and Personal Distress from Collectivism and Individualism in the Korean Dataset

Variables	Perspective Taking		Fantasy		Personal Distress	
	B	95% CI	B	95% CI	B	95% CI
Constant	6.19	[3.46, 8.93]	4.731	[4.79, 11.50]	15.04	[11.85, 18.24]
Collectivism	0.08***	[0.05, 0.11]	0.10**	[0.00, 0.07]	0.03	[-0.01, 0.06]
Individualism	0.01	[-0.02, 0.04]	0.01	[0.05, 0.13]	-0.01	[-0.05, 0.02]
R^2	0.08		0.09		0.03	
F	18.76***		10.85**		6.51**	

Note. N=416. ** $P < .01$, *** $P < .001$

Predicting Perspective Taking, Fantasy, and Personal Distress from Horizontal and Vertical Orientation in the Korean Group

When horizontal and vertical dimensions were examined in relation to PT and FS, horizontal orientation was significant for PT and FS. The horizontal-vertical dimension was also a significant predictor of PD. Horizontal orientation predicted PD in negative direction, while vertical orientation predicted it positive direction. As score high on horizontal orientation, the participants reported less personal distress. In contrast, as score high on vertical orientation, they reported high personal distress (see Table 20).

Table 20

Predicting Perspective Taking, Fantasy, and Personal Distress from Horizontal and Vertical orientation in the Korean Dataset

Variables	Perspective Taking		Fantasy		Personal Distress	
	B	95% CI	B	95% CI	B	95% CI
Constant	5.11	[2.38,7.85]	7.66	[4.33,10.98]	15.55	[12.38, 18.71]
Horizontal	0.10**	[0.06, 0.14]	0.13**	[0.09, 0.18]	-0.06**	[-0.10, -0.01]
Vertical	0.00	[-0.03, 0.03]	0.00	[-0.04, 0.04]	0.07**	[0.03, 0.11]
R^2	0.08		0.10		0.03	
F	19.47**		24.02**		6.51**	

Note. N= 416. ** $P < .01$

Descriptive Statistics of Cultural Orientation Scale in the Korean and Korean American group

Descriptive statistics of the cultural orientation scale of were examined for both groups (see Table 21). The mean scale score of vertical individualism was significantly higher in the Korean with a relatively large effect size ($d=.76$). Within the Korean group, the mean score of high school students on this scale was significantly higher than that of middle school students $F(1, 173) = 4.5, p < 0.03$. The Korean American group scored slightly higher on horizontal collectivism than the Korean group, with a small effect size ($d=.20$).

Table 21

Descriptive Statistics of the Individual Cultural Orientation Scale for Korean American and Korean group

	Korean American (N=215)		Korean (N=416)				95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	LL	UL	
HC	41.97	6.60	40.57	6.67	-2.51*	.01	-2.50	-.30	-.21
VC	38.07	6.86	37.19	6.16	-1.64	.23	-1.54	.38	-.13
HI	40.90	5.99	40.31	5.72	-1.19	.10	-1.94	.18	-.09
VI	31.80	7.67	37.24	6.24	9.59**	.00	4.32	6.56	.76

Note. *M* = Mean; *SD* = Standard Deviation; CI = confidence interval; LL = lower limit; UL = upper limit; C = Horizontal Collectivism; VC = Vertical Collectivism; HI = Horizontal Individualism; VI = Vertical Individualism

The percentage of each cultural orientation in the Korean American group presents the following order: VI (27.9%) > HI (26%) > HC (25.6%) > VC (20.2%). In the Korean group, HI (28.4%) was dominant. The percentage of VC was equal to that of the VI (24%), and HC (23.6%) was the least common (Table 22).

Table 22

Percentage of the Participants' Cultural Orientation

	Korean American (N=215)		Korean (N=416)	
	<i>no.</i>	%	<i>no.</i>	%
Horizontal Collectivism	55	25.6	98	23.6
Vertical Collectivism	44	20.5	100	24.0
Horizontal Individualism	56	26.0	118	28.4
Vertical Individualism	60	27.9	100	24.0
Total	215	100	416	100

Note. *No.* = Number of Case; % = percentage

Research Question 4

How do acculturation strategies (i.e., integration, assimilation, segregation, segregation) of Korean Americans influence empathy as reflected on the factor scores?

It is hypothesized that Korean American individuals using the PT and FS will be in the following order: integration group>segregation group>assimilation group>marginalization group. EC and PD will be in the reverse order.

Regression analysis was used to identify relationships between acculturation status and empathy constructs extracted for the Korean American participants. No reliable factors emerged for PT or PD, so the analysis was limited to EC and FS. There was no multi-collinearity indicated in the predictor variables; tolerance values and VIF statistics were all within acceptable limits. There was no serial correlation among the residuals; Durbin-Watson statistics were less than 2.00. The maximum Cook's Distance was insubstantial, indicating no existence of significant outliers that might have an impact on the coefficient. Non-linearity or heteroscedasticity were not evidenced on the scatter plot. Preliminary examination of the dataset met the required assumptions for regression analysis. Age was not correlated with EC and FS (Table 23). Each participant's acculturation status was determined according to a 15-point cutoff score for each subscale on the CRM-BS. Regression analysis used the acculturation status as predictors; the results indicated no significance (Table 24).

Table 23

Correlation among Age, Empathic Concern, and Fantasy

	AGE	EC	FS
AGE	-	-	
EC	.07	-	
FS	-.11	.02	-

Note. EC= Empathic Concern; FS = Fantasy

Table 24

Predicting Empathic Concern and Fantasy from Acculturation

	Empathic Concern		Fantasy	
Variables	B	95% CI	B	95% CI
Constant	15.92	[14.87, 16.96]	12.28	[11.07, 13.49]
Acculturation	-0.35	[-.85, .15]	0.52	[-0.06, 1.09]
R^2	0.01		0.01	
F	1.94		3.1	

Note. N=215.

Descriptive Statistics of Acculturation

The mean scores of the CRM-BS were greater than 21 for both Korean and American identity, with approximately a 5-point standard deviation (see Table 25). Age was significantly, but negatively correlated with three identity scores on the CRM-BS. Both Korean and American identity were highly correlated with bicultural identity because the bicultural identity score is the sum of Korean and American identity score (Table 26). When a 15-point cutoff score was applied, approximately 84.7% of the Korean American participants fell in the integration status; assimilation was 9.3%; segregation was 5.1%, and 0.9 % fell in the marginalization status (Table 27).

Table 25

Estimated Scale Mean Scores of CRM-BS in the Korean American Group

Sum of Identity Score	<i>M</i>	<i>SD</i>	95% CI	
			LL	HL
American Identity	21.87	4.79	17.08	22.66
Korean Identity	21.47	5.20	16.27	26.90
Bicultural Identity	43.46	7.54	35.91	51.01

Note. N=215, *M* = Mean; *SD* = Standard Deviation; CI = confidence interval; LL = lower limit; UL = upper limit

Table 26

Correlations among Age, Stay Duration, and Cultural Identity Scores of the CRM-BS

	Age	Korean	American	Bicultural
Age	-			
Korean	-.13*	-		
American	-.16*	.13	-	
Bicultural	-.18**	.78**	.73**	-

Since age was negatively correlated with Korean, American, and Bicultural identity, acculturation was inspected by school variable: high and middle school group. Chi-Square analysis indicated proportion of acculturation was significantly different by high/middle school $\chi^2(3, 215) = 9.12, p = .02$. For middle school, integration was evident in 90%, assimilation and segregation each were found in 5%, and marginalization was not found. However, integration made up 78% in high school, assimilation 15%, segregation was 5%, and marginalization was 2%. To identify possible difference on EC and FS by acculturation status, ANOVA was conducted, but none was significant. Descriptive statistics are presented in Table 28).

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Table 27

Descriptive Statistics of Acculturation Status using 15-Point Cutoff Score

	<i>N</i>	%
Integration		
Middle School	107	90
High School	75	78
Total	182	84.7
Assimilation		
Middle School	6	5
High School	14	15
Total	20	9.3
Segregation		
Middle School	6	5
High School	5	5.2
Total	11	5.1
Marginalization		
Middle School	0	0
High School	4	2
Total	2	0.9
Total	215	100

Note. *N* = Number of student; % = Percentage

Table 28

Descriptive Statistics of Empathic Concern and Fantasy

Acculturation Strategies	<i>M</i>	<i>SD</i>	95% CI	
			LL	UL
Empathic Concern				
Integration	15.64	0.62	15.02	16.26
Assimilation	15.00	0.89	14.11	15.89
Segregation	14.92	0.97	13.95	15.88
Marginalization	14.83	4.89	9.94	19.73
Fantasy				
Integration	12.79	0.76	12.03	13.55
Assimilation	13.32	1.02	12.30	14.34
Segregation	13.85	1.12	12.73	14.96
Marginalization	14.17	2.77	11.40	16.94

Note. *M* = Mean; *SD* = Standard Deviation;
 CI = confidence interval; LL = lower limit; UL = upper limit

Given the results, it was attempted to adjust the acculturation status of the participants differently. The raw scores of both cultural identity scales were transformed into Z scores, and the relative distance between two Z scores was used to determine the acculturation status (Howell, 2012). Integration status was assigned when both the Korean cultural identity and Korean American cultural identity simultaneously fell within 1SD unit, or above 1 SD. Assimilation was assigned when the Korean American identity score was 1SD above the Korean identity score. Conversely, when the Korean identity score was 1SD above the Korean American identity score, it was considered as traditional status. When both scale scores fell 1SD below average, such cases were

considered as marginalization. As the result of this converting, integration status made up about 43.7%; assimilation was 26%; segregation was 27.4%, and marginalization was 2.8%. The results of the regression again indicated that acculturation status was not significant in predicting variance in EC and FC. Further analysis used participants' birthplace, subjective identity, language fluency, and duration of stay in the U.S. as predictors; however, these variables were all not significant. Thus, the acculturation status was inspected with regard to its differing influence on the Korean American students' empathy; yet no significance was indicated.

CHAPTER V

SUMMARY AND CONCLUSION

This study examined differing influence of cultural attributes on empathy development. Multi-layers of cultural contexts were investigated relating to the components of empathy. First, influence of macro-system, the collectivism-individualism, was examined as defined by nationality. Second, relation between people's internal cultural orientation and components of empathy was examined to determine the influence of micro-system. Lastly, the participants' acculturation status was used, for the Korean American group, to capture the influence of cultural transition on empathy. Data was collected using the empathy scale, the IRI, and the Triandis' cultural orientation scale, targeting youths growing up in Korea and the U.S.

As the preliminary validation process of the IRI, factor analysis was undertaken based on the assumption of the emergence of a factor structure equivalent to the original IRI; however, validation using CFA was not supported for either group. Several studies that inspected the IRI factor structure found the similar results previously (Cliffordson, 2001; Siu & Sheck, 2005). A possible conjecture about the validity issue may involve language difference. Although back translation was used to ensure the intent of the wording in the original language, the words used in the IRI might have conveyed subtly different connotations to the Korean youths. This result also suggests a possible generational difference regarding operationalization of empathy. Since Davis (1980) developed the IRI a generation ago, modification in operationalization may be required.

Subsequent analysis using EFA on the separate data sets resulted in the emergence of distinct empathy factors for the Korean and Korean American group. Although a five-factor model did fit each group, the internal consistency was only admissible for the EC (affective empathy) and FS (cognitive empathy) factors in the Korean American group. The PT and FS (cognitive empathy) and PD (affective empathy) factors were acceptable for the Korean group. Although the emerged factors in the two groups were not identical, emergence of both components of empathy would support the concurrence in the knowledge base.

The FS factor, a cognitive component of empathy, did reliably emerge for both groups, which measured tendency to identify with fictional characters in media or novels. Cross-culturally, children and youths in the current generation are massively exposed to mass media than any other generation. As such, the FS items were more appealing to both groups of youths perhaps. The FS items were not identical for both groups. The three items overlapped in both groups. The two items loaded only for the Korean group carried slight difference in wordings and asked about one's tendency to fantasize on distal events. The single item loaded only for the Korean American group asked the same content, but in a reverse manner.

The PT did emerge as a reliable factor only for the Korean group, supporting the hypothesis in a different angle. Although the two cognitive factors were not identical to the original factors, emergence of these factors only in the Korean sample might reflect the predominance of cognitive empathy in collectivism.

Predominance of affective empathy (via higher EC score) in individualism was hypothesized. Although a between group comparison on EC was not able to address, emergence of the EC factor only in the Korean American group may support the hypothesis. Also, this result appeared to support the *display rules of emotion*, which suggest implicit social rules for the positive emotional expression prevailing in individualism (e.g., Matsumoto, 1990). Predominance of the PD factor in collectivism was not hypothesized; however, this factor did emerge as a reliable factor only in the Korean group. This result appeared to be in line with the previous studies that indicated comparatively greater experience of negative emotion in Eastern Asian children than their Western counterparts (e.g., Cassels et al., 2010; Trommsdorff, Friedlmeier, & Mayer, 2007).

In the next analysis, individuals' internal cultural orientations were inspected relating to the factors extracted in each group; PT, FS, and PD for the Korean group; EC and FS for the Korean American. Collectivism and horizontal dimension (combined as horizontal collectivism) significantly predicted both PT and FS for the Korean group. This result reflected that individuals with collectivistic orientation (values social role/group's goal over personal goal/need) are more apt to use perspective taking and fantasy, as well as individuals with horizontal orientation (value member's equality over hierarchy). The collectivism-individualism did not predict PD, but horizon-vertical orientation did significantly predict PD. The notion of vertical orientation refers to a desire for upward mobility or tendency to comply/obey to hierarchy in a group. This

result may suggest that individuals oriented to upward mobility were likely to experience self-oriented negative emotional responses upon facing others' plight.

It was hypothesized that individualists would display stronger EC than collectivists according to display rule of emotion. However, collectivism significantly and positively predicted EC and FS, while individualism negatively predicted EC for the Korean American group. This sharp contrast is notable. A possible reason may lie in the similarity of the contents of the items between collectivism and the EC. Triandis' collectivism items asked about one's sociability and tendency to care for family members. These items may have correlated with the "concern for others" that EC items conveyed. FS factor in the Korean American group was significantly correlated with age and horizontal orientation.

In the next analysis, personal cultural orientation was used to predict the empathy components pertaining to each group. This study used the traditionally defined cultural identification of Korea and the U.S. and assumed that the Korean group would score high on the horizontal collectivism while the Korean American group would score high on vertical individualism. The findings revealed the opposite outcome; the Korean group scored higher on vertical individualism while the Korean American group scored higher on horizontal collectivism. Contrary to the change in the cultural atmosphere in Korea towards vertical individualism, it appears that the middle class Korean American youths in the present study are more adhere to the traditional value of collectivism, which was perhaps a marker of enculturation in part. They also may perceive the American culture as less competitive.

It was hypothesized that the integration group would display the highest cognitive empathy score followed by segregation, assimilation, and marginalization group; however, this result did not support the hypothesis. Only two IRI factors were reliably emerged in this group. Therefore, empathy score comparison among acculturation groups was not able address. When acculturation statuses were used to predict the FS and EC, no significant result was found. Also, demographic variables, such as age, language fluency, subjective identity or the duration of stay in the U.S. did not significantly predict EC and FS.

Interestingly, 85% of the Korean American participants presented with the integration status on the acculturation measure, which appeared to suggest their bicultural practice in their daily life. In other words, the majority of the Korean students in the Greater Houston Area seem to have adopted American cultural practice while maintaining traditional value of collectivism. Although the relation between integration status and psychological well-being in immigrant youths has been debatable, the concurrence in the available literature converges on the somewhat positive relation (e.g., Chen, Benet-Martinez & Harris, 2008; David, Okazaki, & Saw, 2009).

High school students scored low on the identity rating than middle school students. The proportion of the integration status was significantly lower than middle school students while traditional/segregation status increased in high school students. This result might reflect the Korean American youths' ethnic identity exploration during this developmental stage (Phinney, 2003).

Limitations

Measurement methodology was the major limitation of the present study to answer the proposed research questions. CFA did not confirm the original four-factor structure, which was consistent with several previous studies. Therefore, the validity issue of the IRI suggests a need to revise the IRI or to develop a more robust empathy measure. Improved measurement will more precisely capture the specific feature of empathy and also could be used in cross-cultural studies.

In addition, there is a possibility that the smaller sample size of the Korean American group (N=215) caused a problem in computational procedures of factor analysis. Sample participants had to meet criteria, which might have contributed to the high level of integration.

The SES, religion, and age of the participants in this study may limit the generalization of the result of this study. The data were collected in the Korean churches located in the Greater Houston Area. As such, the results may have a limitation to generally apply to all Korean students or Korean American students. Both groups were middle-upper class, with predominantly well-educated parents, and attended high quality schools. Age effect was evidenced relating to acculturation status. Thus, if the participants' age range was narrower, different results might have been found. Adolescents' diversifying trends in cultural identity might have influenced on study outcomes as well.

Implications

The proposed research questions were not addressed as initially designed, and the hypothesis were not clearly supported. However, this study has several theoretical and practical implications. First, the findings warrant a consideration regarding conceptualization and operationalization of empathy. Emergence of distinct factors in the Korean and Korean American suggests a possibility that empathy feature may be culture-specific. Therefore, to ensure reliability in the measure of empathy in cross-cultural study, its conceptualization and operationalization may need to reflect on these cultural aspect, as well as language difference.

Second, dominance of vertical individualism in the Korean participants and dominance of horizontal collectivism in the Korean American participants provide new evidence to the knowledge base of cross-cultural literature. Korea was identified as a collectivistic society traditionally, but this society has gotten through industrialization and westernization in a rapid pace in the past decades. It is likely that this transition might have brought in a substantial change in cultural atmosphere, yet the evidence is dearth. The result may suggest the change in cultural atmosphere in the Korea, at least in the middle class, moving toward a society where upward mobility prevails and individuals needs value higher over the community or society's shared goals or harmony. Indeed, in the educational settings in Korea, the value lies on higher academic achievement in the face of a steep competition.

Educationally, the correlation between collectivism and PT and EC suggests a potential benefit in generating harmonious and non-violent school climates. The cultural

value emphasizing group harmony, social responsibility, perspective-taking, caring for others are probably the collectivistic attributes that may need to be taken into account. Indeed, these attributes are the essential components of many SEL.

Future Research

Future studies focusing on improved measure of empathy will provide benefit on empathy study. In addition, future researches focusing on the individuals' cultural orientation and related behavioral/psychological process will provide a better cultural map and a better advancement in cultural study. Relating to age effect on acculturation status, future research focusing on age-acculturation relations will a potential benefit on the ethnic identity development theory in Asian/Korean American youths.

Conclusion

Despite the issues with the IRI, the results of this study add to what is known about cultural attributes and formulations in relation to empathy development. First, results indicated a positive influence of collectivism on the partial constructs of empathy extracted in the datasets. Second, the Korean American group's relative adherence to traditional cultural orientation in contrast to the Korean students' competitiveness and pursuit of upward mobility within a group was surprising and counter to what was hypothesized. Korea's dynamic and rapid change towards a highly industrialized society in the recent decades might have transformed the member's attitude towards and practice on collectivistic values. This result may reflect the changing nature of Korean society and educational settings. Further, the relation between acculturation status and empathy tended to illustrate the influence of dynamic meso-systems.

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APPENDIX A

Interpersonal Reactivity Index (IRI)

The following statements ask about your thoughts and feelings in a variety of situations. For each item, show how well it describes you by choosing the appropriate number on the scale at the top of the page: 1, 2, 3, 4 or 5. When you have decided on your answer, fill in the letter in the blank next to the item. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly and as accurately as you can. Thank you. (*Italics are reverse scored items*)

ANSWER SCALE: Describes me Not at all 1 ----- Describes me very well 5

- ___ 1. I daydream and fantasize, with some regularity, about things that might happen to me.
- ___ 2. I often have tender, concerned feelings for people less fortunate than me.
- ___ 3. I sometimes find it difficult to see things from the "other guy's" point of view.
- ___ 4. Sometimes I don't feel very sorry for other people when they are having problems.
- ___ 5. I really get involved with the feelings of the characters in a novel.
- ___ 6. In emergency situations, I feel apprehensive and ill-at-ease.
- ___ 7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
- ___ 8. I try to look at everybody's side of a disagreement before I make a decision.
- ___ 9. When I see someone being taken advantage of, I feel kind of protective towards them.
- ___ 10. I sometimes feel helpless when I am in the middle of a very emotional situation.
- ___ 11. I sometimes try to understand my friends better by imagining how things look from their perspective.
- ___ 12. Becoming extremely involved in a good book or movie is somewhat rare for me.
- ___ 13. When I see someone get hurt, I tend to remain calm.
- ___ 14. Other people's misfortunes do not usually disturb me a great deal.
- ___ 15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
- ___ 16. After seeing a play or movie, I have felt as though I were one of the characters.
- ___ 17. Being in a tense emotional situation scares me.
- ___ 18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
- ___ 19. I am usually pretty effective in dealing with emergencies.
- ___ 20. I am often quite touched by things I see happen.
- ___ 21. I believe that there are two sides to every question and try to look at them both.
- ___ 22. I would describe myself as a pretty soft-hearted person.

- ___ 23. When I watch a good movie, I can very easily put myself in the place of a leading character.
- ___ 24. I tend to lose control during emergencies.
- ___ 25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
- ___ 26. When I'm reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
- ___ 27. When I see someone who badly needs help in an emergency, I go to pieces.
- ___ 28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

APPENDIX B

Horizontal and Vertical Dimensions of Individualism and Collectivism

Grade: _____ Sex: _____ age: _____ Birthday: _____

READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer the items that describe you by choosing the appropriate number on the 7 points scale.

1..... 2..... 3..... 4..... 5..... 6..... 7

Not at all

somewhat

very much

1. I prefer to be direct and forthright when discussing with people.
2. My happiness depends very much on the happiness of those around me.
3. I would do what would please my family, even if I detested that activity.
4. Winning is everything.
5. One should live one's life independently of others.
6. What happens to me is my own doing.
7. I usually sacrifice my self-interest for the benefit of my group.
8. When another person does better than I do. I get tense and aroused.
9. It is important to maintain harmony within my group.
10. It is important that I do my job better than others do.
11. I like sharing little things with my neighbors.
12. I enjoy working in situations involving competition with others.
13. We should keep our aging parents with us at home.
14. The well-being of my co-workers is important to me.
15. I enjoy being unique and different from others in many ways.

16. If a relative were in financial difficulty, I would help within my means.
17. Children should feel honored if their parents receive a distinguished award.
18. I often do my “own thing”
19. Competition is the law of nature.
20. If a co-worker gets a prize, I would feel proud.
21. I am a unique individual.
22. To me, pleasure is spending time with others.
23. It annoys me when other people perform better than I do.
24. I would sacrifice an activity that I enjoy very much if my family did not approve of it.
25. I like my privacy.
26. Without competition, it is not possible to have a good society.
27. Children should be taught to place duty before pleasure.
28. I feel good when I cooperate with others.
29. I hate to disagree with others in my group.
30. Some people emphasize winning; I am not one of them.
31. Before taking a major trip, I consult with most members of my family and many friends.
32. When I succeed, it is usually because of my abilities.

APPENDIX C

The Cortes, Rogler, and Malgady's Bicultural Scale, Korean-version

Instructions: The questions that follow refer to different ways to experience life in the United States. Please, read them carefully and check the box that best describes your feelings.

Items Not at all =0; A little=1; Quite a bit=2; Very much=3

1. How much are Korean values a part of your life? 0 1 2 3
2. How important is it to you to celebrate holidays in the Korean way? 0 1 2 3
3. How important is it for you to grow up with Korean values? 0 1 2 3
4. How comfortable would you be in a group of Korean who do not speak English? 0 1 2 3
5. How proud are you of being Korean? 0 1 2 3
6. How much do you enjoy speaking Korean language? 0 1 2 3
7. How much do you enjoy Korean TV programs? 0 1 2 3
8. How much do you like to eat Korean food? 0 1 2 3
9. Do you think Korean are kind and generous? 0 1 2 3
10. How important would it be to you for your children to have Korean friends? 0 1 2 3
11. How important is it to you to celebrate holidays in the mainstream American way? 0 1 2 3
12. How much are mainstream American values a part of your life? 0 1 2 3
13. How comfortable would you be in a group of mainstream Americans who don't speak Korean? 0 1 2 3

14. How important is it to you for you to grow up with mainstream American values?
0 1 2 3
15. How proud are you of a mainstream American identity? 0 1 2 3
16. Do you think mainstream Americans are kind and generous? 0 1 2 3
17. How much do you enjoy mainstream American TV programs? 0 1 2 3
18. How much do you enjoy speaking English? 0 1 2 3
19. How much do you like to eat mainstream American food? 0 1 2 3
20. How important would it be to you for your children to have mainstream American friends? 0 1 2 3

APPENDIX D

Assessment of Normality of the IRI in the Korean American Korean Datasets (N=621)

Variable	Skewness	Critical Ration	Kurtosis	Critical Ratio
X26	-.38	-2.25	-.99	-2.98
X27	.32	1.91	-.98	-2.95
X24	.76	4.54	-.36	-1.08
X19	.30	1.76	-.57	-1.71
X17	.22	1.34	-.92	-2.77
X13	-.21	-1.27	-1.07	-3.20
X10	-.20	-1.23	-.50	-1.52
X6	.02	.14	-.76	-2.28
X28	-.19	-1.15	-.87	-2.61
X25	.03	.19	-.85	-2.55
X21	-.50	-3.02	-.58	-1.74
X15	-.24	-1.43	-.91	-2.74
X11	-.65	-3.91	-.36	-1.10
X8	-.55	-3.29	-.36	-1.09
X3	-.43	-2.57	-.45	-1.37
X14	-.80	-4.84	-.25	-.77
X22	-.30	-1.79	-.66	-1.98
X20	-.64	-3.85	-.34	-1.03
X18	-1.43	-8.58	1.25	3.76
X9	-.44	-2.66	-.54	-1.63
X4	-.82	-4.92	-.27	-.83
X2	-.47	-2.85	-.51	-1.54
X23	.07	.46	-1.03	-3.08
X16	.26	1.57	-1.05	-3.16
X12	-.81	-4.88	-.36	-1.08
X7	-.61	-3.69	-.27	-.81
X5	-.08	-.48	-1.13	-3.38
X1	-.30	-1.82	-.96	-2.88
Multivariate			100.59	17.99